

HUNTERS & HUNTING
IN THE ARCTIC



THE DUKE OF ORLEANS





THE LIBRARY
OF
THE UNIVERSITY
OF CALIFORNIA

PRESENTED BY
PROF. CHARLES A. KOFOID AND
MRS. PRUDENCE W. KOFOID

A faint, sepia-toned background image of a classical building with four columns and a triangular pediment, resembling a library or museum facade.

Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

HUNTERS AND HUNTING IN THE ARCTIC





THE DUKE OF ORLEANS AT THE HELM OF HIS
MOTOR LAUNCH.

HUNTERS AND HUNTING IN THE ARCTIC

BY
THE DUKE OF ORLEANS

TRANSLATED BY
H. GRAHAME RICHARDS

WITH TWENTY-FIVE ILLUSTRATIONS

LONDON
DAVID NUTT, 57-59 LONG ACRE

1911

SK265
07

CONTENTS

	PAGE
INTRODUCTION	ix
TRAPPERS	I
BEARS	50
BEAR CUBS	88
REINDEER	106
THE WALRUS	128
SEALS	174

ILLUSTRATIONS

THE DUKE OF ORLEANS AT THE HELM OF HIS MOTOR LAUNCH.	<i>Frontispiece</i>
---	---------------------

	TO FACE PAGE
PRITCHETT ISLAND (FRANZ JOSEPH LAND)—THE OLD MORaine OF BRAGANÇA BAY	xx
THE 'BELGICA' AFTER AN ICE PRESSURE (KARA SEA)	xxiv
MY YOUNG CAPTIVE (JAN MAYEN)	14
FOX TRAPS BEFORE THE VÖGELBERG (JAN MAYEN)— PETRELS AND BODIES OF SEALS ON A FLOE	20
HOUSE OF WINTERERS AT GRIPPER ROADS (GREENLAND) —THE YOUNG MUSK-OX	40
A VISITOR (GREENLAND ICE BANK)	52
TRAMP ACROSS THE ICE BANK IN SUMMER—WOUNDED BEAR	56
A DOUBLE COUP	64
HALLALI!	76
PURSUIT OVER THE GREENLAND ICE BANK—BEAR WOUNDED	84
FEMALE BEAR AND CUB SWIMMING—DEAD FEMALE BEAR AND CUB	88
FEMALE BEAR FOLLOWED BY CUB—CAPTURE OF THE CUB	98
SHIPPING A BEAR-CUB—BEAR-CUB ON ITS MOTHER'S BODY	136

	TO FACE PAGE
A REINDEER AT LOWE SOUND	110
GLACIER ON THE SOUTHERN SHORE OF BRAGANÇA BAY (VIEW OF THE GREAT MORAINÉ)	116
SAILOR CARRYING A REINDEER—NORTHERN SHORE OF LOWE SOUND	122
THE WALRUS OF GREENLAND—MY TWO OLD MALES OF 1905 (KOLDEWEY ISLAND)	138
WALRUS HOISTED ON TO THE ICE (GREENLAND ICE BANK)	144
FOOT OF A GLACIER—PRITCHETT ISLAND (HAMILTON CHANNEL)	150
WALRUS ABOUT TO ATTACK (HAMILTON CHANNEL)	158
APPROACHING A WALRUS. FRANZ JOSEPH LAND (HAMILTON CHANNEL)	166
A CORNER OF THE 'BELGICA'—MY CABIN	182
THE BOAT FETCHING A DEAD SEAL—APPROACHING SEALS	192
OUR PRISONER	202

INTRODUCTION

I CONSIDERED an account of my first two expeditions to the Arctic regions worthy of publication, because each was interesting in its own way.

Exceptionally favourable conditions attended the first, permitting us to cross the Greenland ice-belt at 76° latitude, a region up to that time deemed impassable, and to attain, in the 78° , the French Islands, never before reached even with sledges.

On the other hand, danger and misfortune dogged my second expedition without intermission: the drift in the Kara Sea, repeated strandings and struggles with tempests, combined to form an experience which should prove useful to any who think of navigating these little-known waters.

My last voyage was made under easy and pleasant conditions. It was a circuit, in the

course of which I hoped during the same summer to cross again the Greenland ice-belt, and to touch at Spitzbergen and Franz Joseph Land so that I might obtain a complete view of the ice-fields and lands of the European section of the Arctic.

Success attended this enterprise, but it seems to me useless to narrate at length all my experiences, as they would probably prove wearying to all except sailors.

Taking advantage, then, of the many occasions on which I have been able to study hunting in the Arctic, I have introduced into this volume some descriptive extracts from my diary of 1909, adding thereto memoranda of my 1904, 1905 and 1907 voyages.

As I have in my preceding works given a detailed description of the ice-fields, I think I have already painted a sufficiently vivid picture of the Polar lands I have visited, as well as of the habits of Polar animals and the methods of hunting them, a sport which will very soon be a thing of the past.

In effect, the hunting of marine mammals of such considerable importance during the past three centuries, may already be considered a thing of the past from the commercial standpoint.

With the exception of seal-hunting in the Gulf of St. Lawrence and in the neighbourhood of Jan Mayen, where it is still undertaken by a few American and Norwegian vessels with fairly remunerative results, the hunting of amphibious animals is now only undertaken by small sealers from Tromsö and Hammerfest, which, with considerable difficulty, contrive to collect a cargo of two or three hundred skins in a season.

As regards whale-hunting, apart from three or four Dundee whalers commanded by energetic and experienced men, such as Captain Robertson, whom I had the pleasure of meeting in the Greenland ice-fields, who still find the industry a fairly lucrative one, it may be said to be quite extinct.

In a short while baleinopteres, which are still hunted around the Faroës and off Spitzbergen, but are rapidly being destroyed by the inventions of modern fishers, will, too, have disappeared.

Re-reading, in the course of my expeditions, the accounts which remain to us of ancient whaling, I was astonished that that splendid period of hunting, which, inaugurated by our own Basque sailors, lasted for nearly three centuries, should have been permitted to pass

away without France having taken a greater share in it.

Men, indeed, were not lacking, for during that same period younger sons of French adventurers, as pioneers in Canada's woods or as filibusters in the Antilles, displayed a courage and endurance which have never been surpassed by the explorers and sailors of other nations. The glory of our famous privateers, Jean Bart, Duguay-Trouin or of Du Casse, has tended rather to obscure and make us forget the exploits of many others of our race.

Where, for example, may one hope to find a more admirable display of courage and energy than the life of the Canadian Le Moyne d'Iberville presents ?

Despatched in the month of August 1697, by Pontchartrain to attack the English in Hudson Bay, he pushed his way north accompanied by, but separated from by the ice, three other vessels, and, arriving alone in the bay in his frigate called the *Pelican*, did not hesitate to attack three of the enemy's vessels he found there, although two of them equalled his own in equipment, while the third was almost double his strength.

'D'Iberville,' says Father de Charlevoix, in his 'History of New France,' 'holding the wind,

ranged alongside the two frigates and bombarded them, seeking to disable them. At that moment he perceived the third ship called the *Hampshire* approaching, armed with twenty-six guns on each deck and manned by a crew of two hundred and thirty men. D'Iberville did not shirk the fight, but bore down under full sail and riddled the *Hampshire's* waterline.

'He then tacked back and bore down again on the nearest English ship. Just as he was about to board, she lowered her flag. He immediately gave chase to the third vessel called the *Deringuer*, which fled to the north-east, but was, however, obliged to abandon it, because his top hamper was badly damaged, two pumps had burst, his tattered shrouds were entangled, and he had received seven shots on the waterline.'

This was by no means d'Iberville's first feat of arms.

In 1686, when he was twenty-five years of age, he was sent from Quebec against the English at Hudson Bay, and boarded and captured a twelve-gun ship with two bark canoes and eleven men.

Two years later, at the head of fifteen Canadians, he held a little fort against three English ships, repulsed their attacks, and

killed or took prisoners one hundred and twenty men.

The following year he repeated his first feat of arms by attacking and capturing an enemy's vessel in a single boat.

Of his campaigns in Newfoundland, which he almost entirely cleared of the English, I will say nothing, nor of the three expeditions in Louisiana preceding his death at Havana of yellow fever. If you would know more of this man, you will find in M. Pierre Heinrich's work, 'La Louisiane sous la Campagne des Indes,' a *résumé* of the services rendered to France by d'Iberville and his ten brothers, grandsons of a Dieppe hotel-keeper who became the progenitor of heroes, an examination of which reveals the prodigies accomplished by our American colonists. One's eyes become moist with tears of gratitude on reading how all the children of one family successively sacrificed their health or gave their blood for the honour of the Motherland !

No, our country has never lacked courageous and adventurous mariners ! For every little-known feat of arms I could relate, there are hundreds of others which should live in our memories, for they stand as France's glorious patrimony.

To men such as those I have just mentioned, the hardships and dangers of a fishing expedition could have been no more than sport.

If, as is evident, officers and men were not wanting then, it is necessary to look elsewhere for the reason of our abstention from the exploitation of Arctic resources. The truth is that the Antilles and the Indies appeared such Eldorados to both our merchants and colonists, that all available capital flowed there. As a result, French shipowners found it difficult to obtain sufficient funds to organise whaling companies such as the Anglo-Muscovite Company or the North Holland Company. It is, indeed, curious that Richelieu and Colbert, who did so much for the development of the French Navy, should not have encouraged those commercial enterprises which our neighbours found so profitable.

While, however, French shipowners quickly abandoned fishing in the bays of Spitzbergen, our privateers, profiting by the war following the accession of William of Orange to the English throne, did not remain inactive. Between the years 1689 and 1697, they sold at Dunkirk prizes to the value of £22,000,000, of which a large proportion consisted of enemies' whalers.

The French sent an expedition to Spitzbergen in 1693. The result reflects so much to our credit that I must mention it here. Four frigates took part in the expedition under the command of M. de la Varenne, who remained in the Bay of Smeerenberg with two vessels, while two others commanded by two Basques, MM. de Suhigaraichipe and de Harrismendy, and probably manned by Basques accustomed to the Arctic, pushed their way north to cross the ice along the northern shores of Spitzbergen.

They overtook the Dutch whaling fleet, which sought sanctuary in Treurenberg Bay near the northern entrance to Hinlopen Strait, a dangerous point always threatened by ice, where Nordenskjöld was ice-bound and compelled to pass a winter at the risk of dying of hunger. I myself have experienced the discomfort of an eight days' imprisonment amid the ice. But the Basques knew no fear. Ignoring the fire directed at them from an elevated fort at the entrance of the bay, the two French frigates, towed by their own boats, approached the Dutch vessels, which, to the number of forty, were ranged in a semicircle, each carrying from ten to eighteen guns and manned by crews of fifty men.

To the French captain's command to surrender, the enemy replied with insults and a cannonade.

Le Favory and *L'Aigle* replied so effectively that after a fight lasting five hours the Dutchmen gave way, and, cutting their cables, commenced to leave the bay towed by their boats and assisted by the drifting land ice, which threatened to enclose friend and foe alike.

The French, who had only two boats available, the others having been destroyed in the course of the fight, succeeded with these two in taking thirteen whalers. Of these they sank three and brought the remaining ten *viâ* Smeerenberg to France.

Had the whole French fleet been at Treurenberg, all the Dutch vessels would have been taken. The Commander was blamed for his inaction, but Louis XIV, when the report of the expedition was presented to him, expressed complete satisfaction with the services of the officers and men of the *Favory* and *L'Aigle* and commanded: 'de ne par les oublier quand il y aurait lieu de leur faire plaisir.'¹

It is a remarkable thing that Versailles, keenly interested as it was in Spitzbergen and

¹ See Dr. Hamy, *Bulletin de geog. hist. et descript.*, Paris, 1901, or *No Man's Land* by Sir Martin Conway.

whaling, should have made no effort to encourage French fishing expeditions instead of remaining satisfied with the destruction of Dutch whalers. Probably the presence of English and Dutch cruisers in the northern seas rendered the success of such expeditions very doubtful. On the other hand, the soap makers of Marseilles procured with ease vegetable oils, which rendered them immune from the periods of compulsory idleness such as English manufacturers suffered from time to time. There was, therefore, little inducement for the French shipowner to run the risks which inevitably attended whaling expeditions.

Be this as it may, we must turn to the days of Louis XVI, before we find an organised attempt made to encourage the whaling industry. By this time whales had long since deserted the bays, and the question now was one of deep-sea rather than of shallow-water fishing, of which the Americans were past masters.

‘In 1784,’ so Captain Jouan informs us in his interesting work on fishing, ‘Louis XVI, who was deeply interested in maritime enterprises, equipped six vessels at Dunkirk at his own expense. He manned these vessels with sailors from Nantucket, bringing them to France at great expense.’

‘ The shipowners of Nantucket, attracted by the facilities the French government offered, established themselves and their families in Dunkirk and despatched their ships to many seas. The success attending these ventures was such that French shipowners commenced at last to follow their example.

‘ In 1790 we had forty whalers at sea. This certainly was not a great number, but it augured very favourably for the future of the French whaling industry.

‘ The destruction of our navy, however, at the beginning of the Revolution, left our little whaling fleet defenceless against the attacks of English privateers, who destroyed it completely, and until the Restoration whale fishing was wholly neglected in France.’ ¹

Our whaling industry has never completely recovered from this disaster. Although towards 1850 certain privileges were granted, French whalers, hampered by the all too strict laws of our maritime code, have never become numerous. They have, in fact, never exceeded thirty, while the Americans possessed six hundred and fifty whalers and vaingloriously boasted that, ranged at equal distances in a circle around

¹ *La Chasse et le Pêche aux animaux marins*, par Henri Jouan (Gernier-Baillers).

the world, the vessels would not be lost to sight of each other.

Again, although our sailors of Brittany and Normandy have always fished off the coasts of Iceland and amid the shoals of Newfoundland, an undertaking quite as arduous and dangerous as whaling, it is curious that no French Company has ever attempted to exploit the seals of Greenland, or the sea-elephants of the Antarctic, to be found in thousands off Kerguelen Island, which a Frenchman discovered.

I recently learnt with great pleasure that a young French captain, Rallier du Baty, who accompanied Charcot on his first southern expedition, manned a simple Boulogne fishing smack of forty tons and visited Kerguelen Island. After having hunted the sea-elephants for a year, he sailed for Australia to sell his cargo of oil and skins, thus crossing the Atlantic and Indian Oceans.

A nation whose sailors are so regardless of danger would not, without a very good reason, have permitted such a period of maritime enterprise, so commercially profitable to our neighbours, to pass without participating in it, even though the wholesale extermination of animals be cruel.

The naval predominance of the English



PRITCHETT ISLAND (FRANZ JOSEPH LAND).



THE OLD MORaine OF BRAGANZA BAY.

may explain, but it cannot excuse this neglect ; France should vindicate herself were it only from considerations of moral benefit. If a nation wishes to retain its vigour and to endure, it must nourish a liking for things maritime in its children and induce them 'to go down to the sea in ships.' The sea will always be the best school of discipline and energy. In Norway, where we might almost say every man begins life as a sailor, the beneficial effects of this training are clearly to be seen.

It is at sea that I have experienced the most powerful and poignant emotions of my life, where I have always been most keenly conscious of the presence and protection of God ; and it is when I have been face to face with the dangers of the sea that I have seen social distinctions vanish, he alone commanding who had proved himself worthy to command.

If the perusal of these pages shall serve to awaken in the breasts of young Frenchmen a desire for the sea, all too neglected nowadays, I shall be profoundly happy.

In the following pages, maritime descriptions will necessarily occupy an important place ; indeed, there is no comparison between deer-hunting as I have known it in Africa and the Indies, and the hunting of Polar animals.

In these days, however, when the railroad passes right through the game preserves of Central Africa, enabling one to shoot lions and elephants without leaving the train, I advise the disciples of St. Hubert to seek their sport in tropical forests rather than in the ice-fields, which are less easy of access. Polar hunting is in reality only shooting practice ; it lacks the emotions of a tramp through the forest and the surprises of a forest hunt. An expedition to the frozen seas with the sole object of hunting would very soon degenerate into nothing more than a useless massacre.

Only sailors can enjoy these northern hunts ; nevertheless, the numerous incidents which result from the pursuit of game while a vessel forces a way through the pack-ice towards one of the Arctic lands, lends diversion to the severities of scientific investigation, which is the real object of the expedition.

I have never embarked for Polar seas, which possess an indescribable fascination for me, without great heart burnings at the thought of leaving behind, for an indefinite period, all those who are near and dear to me, and who have assisted me to endure the life of an exile. On each occasion I have watched the approach of the moment of departure with increasing

anguish ; but, the parting once over, I have felt exultation only on finding myself alone with my companions, sailing towards the new adventures and dangers awaiting us.

To the true sailor there is perhaps nothing so attractive as a cruise in northern seas, confronted as he is with the dangers of the ice, menaced as he is day and night with fogs and gales.

The weather changes in a single hour in Boreal regions, and one's impressions undergo similar modifications.

A day of fog and threatening ice, which depresses and makes one anxious, is succeeded by a bright clear day of open ice and renewed enjoyments.

A ray of sunlight transforms everything, making a fairyland of a desolate, dead world.

I do not fear responsibility, and know a no more delightful position than that of commander of a ship. On all my voyages I have surrounded myself with the most competent and experienced men, without whose assistance scientific work would have been impossible. Nevertheless, I have always retained command, and have desired to be kept *au courant*, day and night, with all that transpired aboard. A Polar expedition must be conducted in this way, for

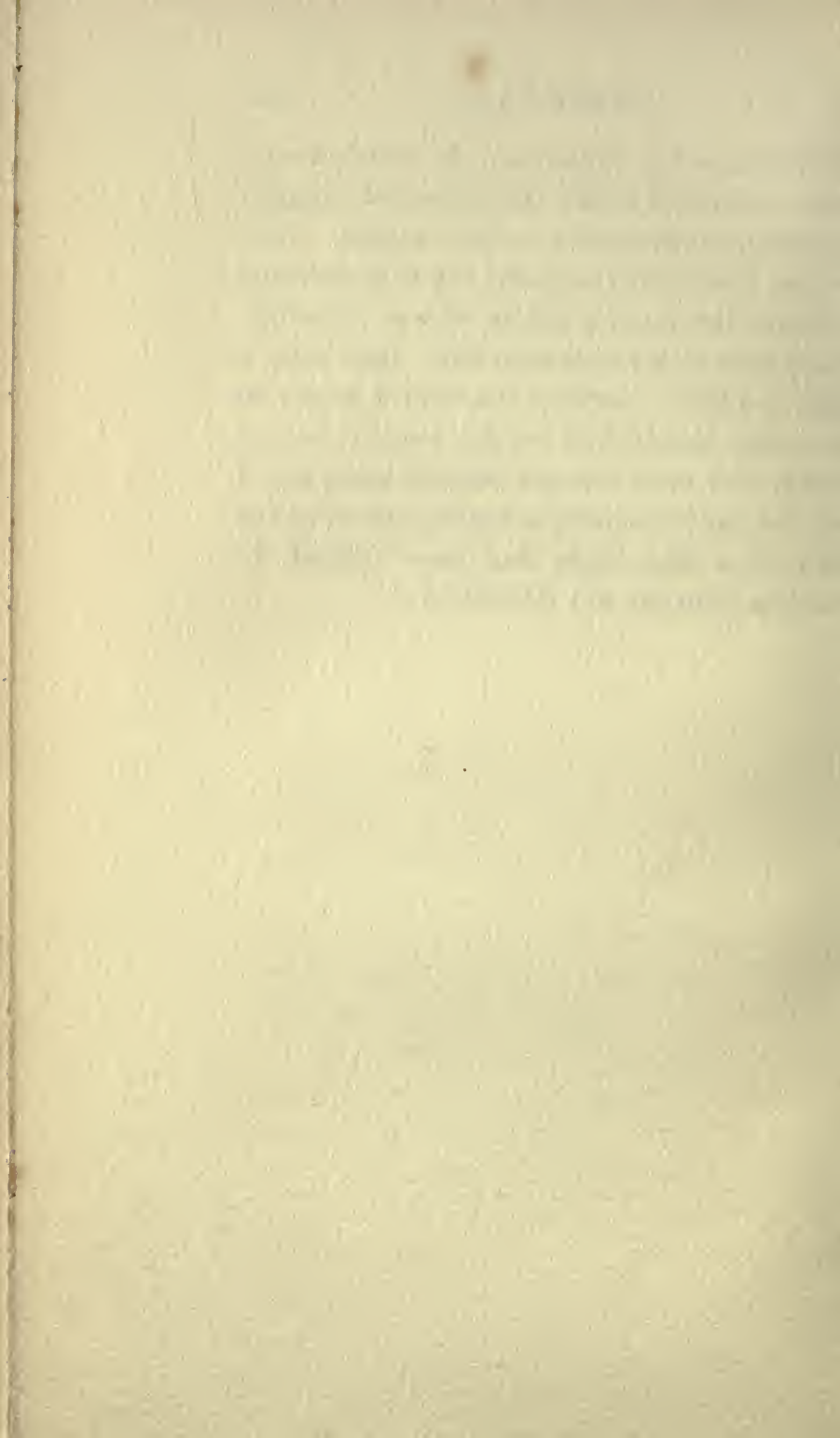
then one feels oneself to be the very soul of this group of men, resolute, faithful, and united by common danger ; then, too, does one keenly enjoy the contest between the strong ship and the ice, the fog and the tempests. Those primitive instincts inherent in man reawaken, filling one with the ardour and enthusiasm which inspired the earliest navigators.

The age of maritime discoveries has passed away, and it was only by wholly unexpected good fortune that at this epoch I was permitted, with God's aid, to plant the flag of my country on a new land ; but the attraction of the northern solitudes remains ever the same, and in commencing my return journey last autumn, it was not without deep regret that I saw the frozen Arctic disappear astern. For six years those regions had granted me forgetfulness of my position as an exile, had taught me, too, many new emotions pleasant and otherwise. The sadness which comes of long isolation sometimes preyed upon me ; inevitably there came moments of disillusion and days of despair. Those frozen seas taught me to love, even while doubting them ; to them I have given part of a wandering exile's life, part of my innermost self. When I bade them adieu, I bade farewell to a never-to-be-forgotten period of my life.



THE 'BELGICA' AFTER AN ICE PRESSURE (KARA SEA).

Whatever the future may be which Providence has in store for me, those repeated struggles with the ice and sea have not been useless. They have at least served to enable me to understand and love the humble sailors who so cheerfully risked their lives for me each day ; they have, I hope, tended to develop the man I aspire to be, so that should God one day see fit to impose greater and more onerous burdens upon me, I may not prove wanting on finding myself at the helm of a ship larger and more difficult to navigate than my old *BELGICA*.



HUNTERS AND HUNTING IN THE ARCTIC

TRAPPERS

DURING the winter months only is the hair of the white bear thick and in good condition, whilst in summer the skin of the white or blue fox becomes grey, mangy in appearance, and quite worthless from the marketable point of view. For these reasons the fur hunter is compelled to pass the winter in the northern regions.

The custom that arose among the English and Dutch whalers of the seventeenth century, of leaving men to guard the boilers and other apparatus established at Spitzbergen, combined with the fact that numerous shipwrecked sailors survived winters on these coasts, proved conclusively that it was physically possible for Europeans to endure the rigours of a Polar winter. So, when the last of the whales quitted the bays

and journeyed northwards, and the whaling industry, following in the wake of the cetaceans, was transported to higher seas, Russian trappers, engaged by the furriers of Archangel to exploit the animals of the region, occupied the Spitzbergen coasts. Judging from the number of ruined huts, and the crosses marking the sepulchres of those who succumbed, these trappers must have been very numerous.

There were, indeed, terrible winters when the ice, unmelting, delayed the relief ships despatched in the spring, compelling the trappers to remain two consecutive years at their posts, often dying of hunger and scurvy. Then, as now, the success or failure of a wintering depended on the character of the leader. Instances might be quoted of sailors, well furnished with all the necessaries of life, but badly disciplined, dying of scurvy; while others, deprived of almost every resource, but governed by efficient leaders who were wise enough to maintain moral health by physical activity, have survived the dangers and hardships of several winters in those inhospitable regions. In illustration of this, M. Leroy, a member of the Imperial Academy of Science, St. Petersburg, published a brochure in 1750 recording the adventures of four Russian sailors stranded at Spitzbergen

in 1743, who contrived to subsist on neighbouring resources until 1749.

The sailors in question were members of a walrus expedition to western Spitzbergen. One day their boat was carried away in the surf, and they were left stranded on what appears to have been Edge Land. The boat disappeared amid the ice and was never seen again. Examination revealed that the men had with them no more than one gun with twelve charges, a hatchet, a knife, a small boiler, some matches and twenty pounds of flour, in addition to a quantity of tobacco and their pipes. Inevitably, despair seized them when they realised that fate had marooned them. The dauntless courage of a quartermaster named Himkof, however, inspired them with renewed hope. Himkof induced them to prepare for the approaching winter without loss of time.

A hut was constructed from timber cast ashore ; twelve reindeer fell to the gun ; clothes were made from the skins ; lamps were moulded from clay, the fat of the reindeer provided oil, the men's shirts wicks. From the bolts of a ship's planks floating in the surf, spikes were fashioned ; the bolts being made red hot and hammered into shape between two stones. Bows and arrows were also manufactured, and

even needles to sew the skins together, the tendons of the reindeer providing thread. Armed and fortified in this way, the men made war on the bears. For six years they lived on the island, during which time only one of the four died. Their signals were observed by a passing Russian vessel in 1749, and the men returned to Archangel in excellent health, carrying with them a small fortune in fat and skins.

Not for an instant had Himkof lost heart. He had called his companions to prayer, allotted them daily tasks, and kept them constantly occupied. That alone saved them.

In concluding his little history, M. Leroy adds that when the vessel bearing these men drew up alongside the quay at Archangel, Himkof's wife, who was awaiting her husband, fell into the sea when she recognised him on the bridge and was drowned. Excessive joy, the writer asserts, caused this sad fatality.

The fate of other sailors who have been cut off in this way has not always been so happy.

In 1850, according to Lamont, who visited the spot and viewed the hut, eighteen trappers met at Whale Point, the southern extremity of Edge Land, to await the arrival of the vessel

sent to transfer them to Archangel. This vessel disappeared at sea, and an enormous iceberg, which had remained floating to the westward of Spitzbergen throughout the summer, prevented other vessels from bringing relief to the trappers. At the same time this berg drove southwards the seals and birds on which the hunters might have sustained themselves during the winter. In the month of August, several Norwegian fishermen, who had also failed to embark, came to the Russian station seeking succour. They found all the trappers dead. Fourteen had been buried by their companions, two lay before the door of the hut, inside were the remaining two, one on the floor, the other on the bed. On the body of the latter, who had acted as leader and who could write, was discovered a note-book which contained a detailed account of the awful sufferings of those who had died one after the other of hunger and scurvy. The leader was the last to succumb, and he had died only a few days before the arrival of the Norwegian sailors. The sailors took advantage of the loosened ice towards the end of August, met the ship sent to the relief of the Russians, and returned to Hamburg with the note-book referred to. When Lamont visited the place eight years later, he found the hut

of the unfortunate Russians, their arms and other belongings, exactly as they had been left.

Andersen, an old and experienced winterer, whom I met at Jan Mayen, once gave me at Tromsø an old portrait of Christian IV of Denmark, which he had discovered in an abandoned hut at Spitzbergen. The portrait was hung on the wall between two human skulls. These skulls on either side of the portrait of the great law-giver probably commemorated some lynch-law tragedy of the northern wilds. For it is not only scurvy, hunger, cold and the bears which menace the trapper; he has also to fear his own kind. The primitive law of Might even to-day prevails in Spitzbergen, and frequently unfortunate hunters, enfeebled by the hardships of a long winter, have been assailed and murdered in the spring by the crews of fishing vessels, who robbed the trappers of the skins they had collected. Chance has betrayed many of these assassins, but who can tell how many similar atrocities have never come to light? One of the most remarkable instances of retribution that has ever claimed my attention is the following:

About the year 1830 a Russian vessel returned to Archangel minus its captain. The

crew reported that he had been carried away with two of the sailors during a tempest ; such incidents are of common occurrence in these regions and the statement was accepted without question. The world went on its way and the matter was forgotten.

Ten years afterwards a Norwegian fisherman discovered on one of the Spitzbergen coasts a human skeleton, and a metal tobacco box, on which had been scratched certain words in a language he did not understand. He brought the box to Tromsö, where the Russian Consul translated the words and announced that the box had belonged to the captain of the above-mentioned Russian vessel, that his crew had abandoned him, that his two companions had died of starvation, and that he himself was on the point of death.

The tobacco box was sent to Archangel, where, notwithstanding the lapse of years, several members of the crew were discovered, brought to justice, and condemned to expiate their villainy beneath the lash in the Siberian mines.

Nowadays it is not the custom to spend the winter on any of the Spitzbergen islands except those to the east, such as Hope Island and Kong Karl Island. The annual destruction of the bears on these islands is so enormous

that in a short time they will inevitably be completely denuded of furred animals.

I found that the five hunters stationed on Hope Island, which I visited in 1909, had killed eighty bears without counting the wounded animals which had vanished, to die away over the ice.

Bears are so rare even in the winter on the western coasts of Spitzbergen that the exploitation of them has been abandoned. Very shortly, too, the coal-miners will have destroyed the few foxes and reindeer remaining. It is interesting to note that it was in this neighbourhood, Ice-Fjord, that that famous old trapper, Starchine, passed thirty winters from the years 1810 to 1840 and never once lacked game.

Trapping will soon be a thing of the past in the European section of the Arctic regions.

During my last voyage I met, at Jan Mayen and on the coasts of Greenland, two groups of wintering Norwegians who merit some mention in these records.

For long I had desired to visit Jan Mayen, and my anticipations were finally realised when, on June 21, 1910, I approached the huge cone of Beerenberg, which, rising from a sea calm as a lake to a height of almost eight

thousand feet, kissed to virgin whiteness by a brilliant sun, is one of the most gorgeous spectacles one can imagine.

The island of Jan Mayen is about thirty miles long, lying from south-west to north-east, and is formed of two separate masses of rock connected by an isthmus. The southern portion presents nothing but a series of peaks of ancient craters, which rarely rise higher than about eighteen hundred feet. The northern half is triangular in shape, and possesses about ten miles of coast line from which, in one enormous mass, rises the crater of Beerenberg. East and north the mountain declines in a series of peaks supporting glaciers which fill the deep gullies and finally drop sheer to the sea. The narrow tongue of land connecting the two parts of the island is about a mile and a half wide. To the north, a chain of hills about five hundred feet high forms the isthmus. To the south, it extends a vast waste of cinders and lava, almost completely filling what was formerly a lagoon. This lagoon contains but little water even in winter, and in summer is quite dry. The plain is several miles long and is completely covered with flotsam, from which the bay it borders derives its name.

The two craters seem to rise like sentinel

towers north and south of the isthmus ; the northern is known as Vögelberg, the Mountain of Birds ; that to the south, the Eier Busch, or Island of Eggs, is composed of slopes of cinders and lava.

Altogether, the island is but a collection of craters, dominated by a giant volcano whose white summit is lost in the clouds. The volcano has long since been extinct and we have no record of its last eruption. Since the discovery of the island by Dutch whalers in the seventeenth century (1609-1610), it has manifested no activity. Occasional clouds of sulphurous smoke arising in the vicinity of the Island of Eggs proves, however, that internal fires still exist.

The island possesses no permanent inhabitants. In the days of the great whaling expeditions, the Dutch established an important station, traces of which are still to be seen between Vögelberg and the northern lagoon, the water of which is drinkable. Six sailors were left here in 1630 in charge of some apparatus ; they all died of scurvy before the re-arrival of the fleet in the spring. In these days, when whales have almost completely disappeared, Jan Mayen no longer attracts the fishers. Captain Swensen told me that fur hunters

occasionally wintered there because the foxes are very numerous.

It is both remarkable and unaccountable why the mortality from scurvy has always been so great on this island. The climate is by no means rigorous, although the loneliness must be terrible.

All the morning the weather had been clear and cold beneath an obscured sky ; we made four knots through a sea as smooth as oil, numerous birds flying and swimming about the ship. Petrels and guillemots were numerous, and I also saw three woodcock, several macareux and mergules, one or two grylles, and a stercoraire.

At noon the weather cleared completely and revealed a magnificent view to us.

Directly before us Beerenberg reared its white cone, rising majestically above a bed of clouds which encircled it at mid-height. It dominated all and seemed to belong to another world ; the rest of the island, with its peaks and craters, being dwarfed to insignificance by this grand and imposing mass.

At two o'clock we passed South Cape, which is an enormous split rock. It is a curious coincidence that the last cliff I saw on leaving the Faroë Islands, and the first I sighted at Jan

Mayen, should both have vividly called to my mind Etretat.

At four o'clock we doubled a huge basalt column, isolated and separated from the cliff to which it belonged. This column is known as 'The Lighthouse.'

To the east, a little boat with red sails met our eyes. It lay off the Flotsam Shore and seemed to await us. This is another remarkable rock called the 'Pilot Boat' from its great resemblance to that class of vessel. The cliffs along which we made our way were volcanic, and thousands of birds nested in them. As we passed they left their nests in flocks to wheel and swarm about the ship. In the hollows of the cliff rare herbs and mosses were to be seen, but there were no signs at all of reindeer or hares.

Still nearer we approached; Vögelberg, surmounting the irregularities of the isthmus like some high tower, now took definite shape. White and rugged as it is, it has all the appearance of some old chateau dominating and defending the isthmus. While I was examining, through the binoculars, the thousands of birds which make it their nesting-place, a man suddenly appeared above the crater line and stood silhouetted against the sky-line. I announced this fact to Mérite, who was incredulous. He

had eagerly desired to set foot on a desert island, and this discovery at once disconcerted and disappointed him. Soon where there had been one man, two, three, then four appeared. They were evidently fur hunters from Tromsö who had wintered on the island.

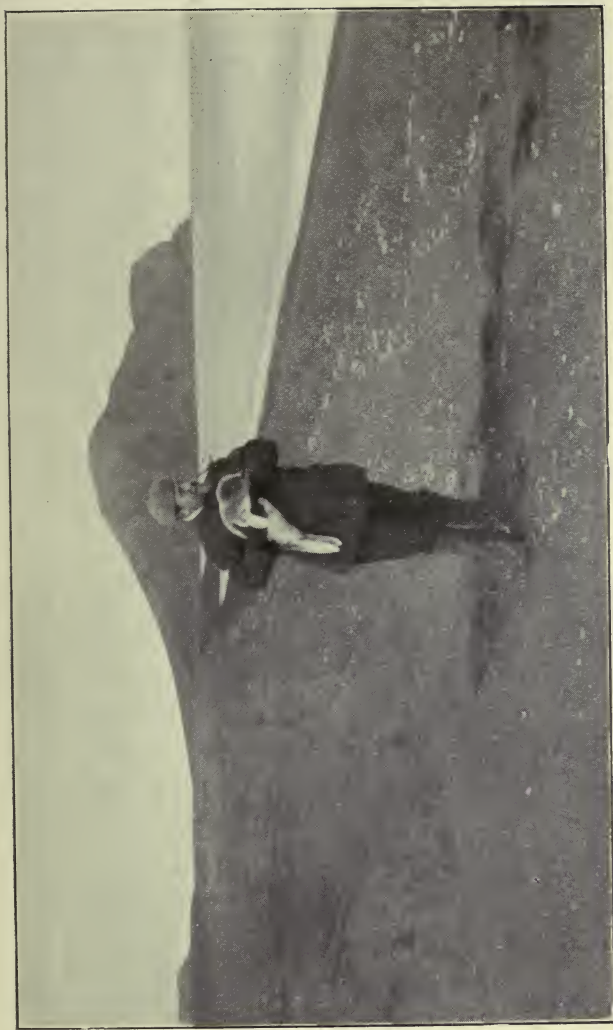
Mérite's disappointment quickly merged into curiosity. The idea of inspecting the traps, and of questioning the trappers as to the manner in which they hunted foxes and other animals, excited him greatly.

At half-past six we anchored in eight fathoms of water near the Flotsam Shore, in direct north to south alignment with a high basalt column, part of which rests in the lagoon. On the maps this is known as 'Säul.' We dined, and at half-past seven set out for the shore. The beach before us presented no indentations. It is composed of cinders and fragments of worn lava, and extends smoothly for several miles. The waves beat directly upon it, forming a surf which renders disembarkment always difficult, and sometimes quite impossible.

As we neared the beach we found the sea covered with thousands of petrels, who displayed no fear at our approach. They floated on the surf in serried ranks, and as each wave retired, they fluttered forward into the boiling

foam, chattering and fishing. Each receding wave brought them an ample supply of the shellfish on which they live. We forced a passage through them without disturbing them in the least, and beached our boat. At that moment I perceived a young grey seal lying on the sand some few yards from the sea. Intercepting its retreat, I took it into my arms while the men busied themselves in dragging the boat high and dry. We all caressed the little animal ; indeed, it seemed to have found its way to the spot to accord us a welcome to this desolate island. One of the sailors finally took charge of it.

We afterwards set out to explore the isthmus, having it in mind to visit the Austrian station of 1882, where we expected to find the fur hunters. Scaling a small dune composed of blackened cinders and lava, we saw before us a large plain, quite flat and smooth, which formerly must have been the bottom of the lagoon. Numerous tree-trunks, some with their roots intact, some smashed to fragments, and others stripped of their bark, covered the ground. Here, in fact, was an almost inconceivable collection of *débris*, which either the ocean had gathered together or the ice had brought from Siberia or America in those distant ages when this now dry soil had been the ocean bottom. The upheaval of



MY YOUNG CAPTIVE (JAN MAYEN).

land, which in the Arctic regions takes place very slowly, had first transformed the bay into a lagoon. The lagoon, now almost wholly dry, had preserved as witness of its past these masses of flotsam. There was little or no vegetation, except extremely rare clusters of white or yellow anemones.

As we descended, two men approached us. The first of the two was dressed in a black leather coat and fur hat. He politely saluted us. We learnt that he was the chief of a group of six trappers from Tromsö, who had been on the island since the preceding July to hunt foxes during the winter. One of the party had died of scurvy in February; another—as a matter of fact it was the man accompanying the chief—displayed early symptoms of the same fell disease. He believed death inevitable, and had come to beg of us lime-juice to ease his suffering.

Récamier turned back with the sick man and took him on board to examine and prescribe for him. The rest of us pushed forward until we came to the Austrian station, where we found the other trappers.

In accordance with a long-established custom these hunters had separated during the winter, three of them occupying the Austrian hut on

the northern coast, the others building themselves a hut on the southern part of the island.

Traversing swamps of sodden cinders in which the foot sank deep, we commenced to climb firm and easy slopes leading to the crater. These slopes are broken by numerous gullies at whose bottom basalt and lava are found. Occasionally one encountered great heaps of shale, similar to those to be met with at Nova Zembla. From a distance I observed a trap, which was manipulated by a weight. Mérite was greatly interested in this specimen of a primitive gin. On the summit of a hummock we discovered a second trap destined to capture foxes alive, the working of which was explained to us by our guide. At this point we were able to see the abandoned Austrian station at the foot of the Vögelberg, close to the little bay of Mary Muss. From the distance the small circular huts appeared to be strangely like conservatories. Descending a steep slope, we crossed a stream flowing from the northern lagoon and so reached the station. At the entrance we were rather sulkily accosted by one of the hunters. It transpired that innocently enough we had occasioned the trappers intense disappointment. Seeing our colours streaming in the breeze when we anchored,

they had concluded that our vessel was a sealer from Tromsö sent to their relief. Great joy, easily conceivable by any who have learnt the real meaning of complete and total isolation amid snow and ice, had seized them. They had even gone so far as to commence to pack for their departure before they had recognised their error. That we should have been greeted sulkily, therefore, was not surprising.

Our guide conducted us into the station. The five surviving trappers occupied one room only. It was spacious, lofty, and well warmed by a Tromsö stove. Comfortable beds were ranged along a thick timber partition. On the walls were old engravings from many lands, as well as souvenirs left behind by the ships which had visited Jan Mayen. Among others was one commemorating the visit of the *Manche*, which made a cruise to Jan Mayen and Spitzbergen in 1892. I discovered, also, the name of Dr. Charcot, who visited the island in 1904 in his yacht *Jeane-Marie*. At the moment of writing, he is wintering in the Antarctic at the head of the 'Pourquoi-Pas' expedition; my heartiest wishes went out to him when I beheld evidence of his visit to this lonely spot.

A kind of tunnel connected this chamber with the others, uninhabited now, but which

formerly the Austrians used for their magnetic observations. One of them contained casks of provisions they had left behind. The casks had never been broached. Close to the station a kennel had been built for living foxes. It contained three which had recently been captured. They were extremely savage, and from their kennel there exuded an indescribable stench. After having inspected the foxes, we were shown the pelts gathered during the long winter. There were more than a hundred of them, of both white and blue foxes, several of which were remarkably beautiful. When the trappers had come to the island in July, the foxes, grey and mangy as they are during the summer, were of no value. In order to tame them and so render them easy of capture in the winter, the hunters had fed them on birds they had killed and flung near the station. After a short time as many as thirty foxes had appeared daily, and waited until they were fed. Traps were set in order that the foxes might inspect them and learn not to fear them. Several foxes were captured and released. By these means the confidence of the animals was gained, and then, when the winter came and the skins were in good condition, the hunters went seriously to work.

Trappers make use of several kinds of traps. In the first place there is the ordinary trap, similar to the one we ourselves use for destroying foxes and wolves. It comprises two iron toothed jaws, which close with a spring. This trap is set openly in the path of the foxes, a suspended dead bird tempting the animal to its doom. To obtain the bait the fox leaps into the air and, in falling backwards again, its paws enter the trap, the jaws of which snap together instantly.

Another commonly used snare is constructed of heavy stones balanced by a weight to which the dead bird is attached. In this instance the animal is crushed to death. The most important trap of all, however, is that destined to capture the fox alive. It is composed of a long wooden box at the bottom of which the dead bird is placed. The animal enters the box, takes the bird in its mouth, and in doing so releases the spring which causes the lid to slam down violently.

No pains at all are taken to hide this latter form of trap. They are easily seen from a distance. For the fox must either be very tame or famished before one may hope to take it alive. Nevertheless, much trouble and ingenuity is expended in training and winning the

confidence of a fox leader so that it may in turn lead others into the traps.

The leader of the trappers informed me that throughout the winter the thermometer had not fallen below six degrees, and that they had had practically no snow. As regards icebergs, not one had appeared in the vicinity of the island.

From one of these men I bought a knife made from the tusk of a walrus. One finds that all these northern winterers have their own particular *métiers* which preserve them from the ennui of the long northern nights.

Before the door of the station I photographed the group of hunters. To my great astonishment, one of the men casually drew out of his pocket a Kodak of the latest pattern with which he photographed us in his turn.

Accompanied by the leader of the hunters, we set out to visit Mary Muss Bay, which is situated to the north of the island corresponding to the dried-up Flotsam Bay in the south, though it is much smaller and is still occupied by the sea.

We passed through a veritable cemetery composed of the bones and skulls of foxes and birds of every description. An enormous trap left by the Austrians, designed, judging from



FOX TRAPS BEFORE THE VÖGELBERG
(JAN MAVEN).



PETRELS AND BODIES OF SEALS ON
A FLOE.

its size, for the capture of bears, was pointed out to us. It is unnecessary to say that no bear has been seen in these regions for a long time past.

To gain the beach we were compelled to cross the large flotsam-covered plain. In the centre of this, a copper plate inset into a rock commemorates the winterage of the Austrian Mission, organised by Count Wilczeck in 1882-1883.

We arrived at last at the foot of the Vögelberg, one half of whose immense crater falls sheer into the sea, forming a cliff in which thousands of petrels nest. It is here the trappers obtain the bait for their traps.

Guillemots and macareux teem amid the rocks farther north. These present the hunters with the only fresh food obtainable, but in winter these birds migrate. The petrels are the only birds which remain the whole year round, but they are not edible. During the winter, therefore, the trappers cannot obtain any fresh food, and perhaps it is due to this privation that scurvy, the scourge of these latitudes, may justly be attributed.

On the sands we encountered numerous turnstones, which Mérite approached cautiously. He succeeded in shooting two of them, and was

so elated at his success that we almost had to use force to induce him to accompany us to the western shore. There we found a second cliff in which the petrels nested. We inspected Wilczeck Point and Brille Tower, which marks the entrance to the Walrus Gap (it is certain no walrus has been seen there for considerably more than a century). On the other hand, however, our guide informed us that only a few days ago he had watched the passage of a large whale. He had observed in the preceding July a school of whales ten miles to the north-east of the cape. One of these whales had been stranded on Flotsam beach, but had escaped before it could be destroyed.

Snow began to fall thickly, while the ice grew hard beneath our feet. Icy stalactites fringed the cliffs, reminding us that Polar nights are not to be despised, so we turned back to the ship.

As we passed the station, we were informed that the sick man had returned from the *Belgica*, and was already feeling better. He had been reassured by the doctor and given a supply of drugs. Subsequently, at Tromsö, I learnt that our opportune intervention had resulted in his complete recovery.

I enquired the name of our guide, and

learning that he was the brother of Andersen, a fur hunter of Tromsö, I asked if he recalled Cziget, a dog I had purchased from his brother in 1905. The man's face lit up with joy when he heard the name. He informed me that Cziget had belonged to him in the first place. Naturally, all restraint between us vanished at this news. He addressed me as he would have done an old friend, and was particularly pleased when he discovered that I appreciated the dog at its true value. We spoke of the winterage, the isolation and sadness these long absences involve. Andersen was burningly eager to return, to see again the wife he loved, to learn if all were well at home. Nevertheless, he was already contemplating a new expedition to Greenland, to hunt through the winter in the neighbourhood of the Franz Joseph Fjord. They loathe the ice, these Norwegians, and truly I do not find their detestation difficult to understand !

Descending the hill, we had to cross a plain where the frozen lava had assumed curious shapes. One would have said that coils of thick cordage had been strewn over the surface of white asphalt.

Apropos this, Andersen informed us that the Island of Eggs is not so warm that snow

never rests on it, as is commonly believed. We were able to confirm this statement ourselves, for the island lay before us, virgin white beneath a shroud of newly fallen snow. The only spot where one can encounter signs of volcanic activity is on a plain extending between the island and the foot of the Beerenberg. Here, sulphurous fumes occasionally burst through the earth crust and are discernible from a distance.

We gathered a few roses, similar to those I have so often seen at Spitzbergen and Nova Zembla. Andersen informed me that he found on the cliffs a large blue flower resembling a marguerite which he had never seen elsewhere. We searched for these flowers, but failed to obtain any. We learnt also that the Beerenberg had been visible all the winter, but that in the spring mists had surrounded it, which would not disappear until the following winter. We congratulated ourselves on having been able to distinguish it clearly that morning, as the sightseer is rarely granted such an opportunity. Andersen had found it easy to ascend to a height of almost three thousand feet when the summit had abruptly disappeared.

At last we arrived in sight of the beach where Récamier awaited us, wrapped in a

loose great-coat, busily stirring a fire of tree-branches with his alpenstock. As Mérite still wished to watch the petrels feeding, I sent Lieutenant Rachlew to accompany Andersen on board, with instructions to supply him with tobacco, cigars, preserved vegetables and potatoes. Meanwhile, I walked with the Doctor along the sands as far as Flotsam Bay. Never before had I believed it possible to see at one time in one place such an assemblage of petrels. They extended for several miles, blackening the surface of the sea. Examining the spume left by the waves on the shore, I perceived innumerable minute shell-fish on which the birds feed. These little crustaceans are called sea-lice in Normandy. They form the petrel's only nutriment. Suddenly all the birds, alarmed at something we could not define, rose from the water.

When the wind blows strong from the south, these birds seek refuge in Mary Muss Bay. Near the water-station they appear in such numbers as to render it difficult for the men to move about. Their constant cawing is intolerable. I vividly recall an occasion when I passed two nights anchored in Green Harbour alongside a whaler storing blubber. Thousands of petrels surrounded us. Of the sleeplessness

which necessarily resulted I did not complain. For, apart from the shrill, piercing cries of the never-silent birds, there was a heavy, choking stench which rendered the position quite impossible.

I left Joe for a few minutes and walked towards 'Säul,' that enormous column of black basalt previously mentioned. I had observed numerous traces of foxes leading in this direction, and I desired to learn where they repaired to, as well as to be alone for a short while. A fairy-land world surrounded me. The snow, which had now been falling for almost two hours, had whitened the summits and besprinkled the sides of the mountains. The midnight sun tinged the distant clouds to faint rose and light green. This effect, unknown to other latitudes, lends that distinctive charm which characterises the crepuscule in Polar regions. Sombre snow clouds covered the sky's dome. These clouds, disappearing towards the south-west, permitted the summits and white sides of the southern mountains to be seen.

Alone on that far-extending desert of snow, amid a silence broken only by the rhythmic and hollow roar of the waves beating on the shore, a prayer sprang spontaneously to my lips, . . . it ever seems to me that I am nearer God

when alone on strange, desolate lands. I had to tear myself from the contemplation of this spectacle to return aboard. As I went back, I encountered quantities of débris in the form of planed wood, together with a number of those glass bowls used by the Norwegian netters. They had probably been carried here by the currents. I also observed a few sea-swallows and stercoraires, birds rarely appearing in these latitudes.

Rejoining Joe and Mérite, who were shivering despite the large fire the men had built, and having wished Andersen farewell, we re-embarked at two o'clock in the morning, half frozen, but wholly contented with the result of our excursion and deeply stirred by the wonderful spectacle we had just contemplated.

A few hours later we proceeded on our way, killing seals and bears as we went. Sometimes the ice delayed us, but for the most part we were able to navigate the immense canals, several thousand yards wide, which rendered access to the Greenland coasts exceptionally easy that year. As a matter of fact, the way was free as far as the land ice surrounding Cape Hold With Hope, where we arrived on June 27. The *Belgica* was, without loss of time, anchored to the ice, and I set off on the

trail of a large bear which, calmly lying on the ice, appeared to have been awaiting our arrival. But the bear was one of experience; neither the odour of seal-grease nor that of burnt herrings induced it to approach. It carefully kept its distance, rising from time to time on its hind legs to study us. As it was altogether out of range, I went ashore, accompanied by several men, hoping to be able to approach it more closely, but the bear trotted away as soon as we moved towards it.

Without difficulty I crossed the land ice, seven or eight hundred yards wide at this spot. Fragments of ice had formed a bridge over the narrow canal which always separates land ice from the shore, and I stepped on to firm ground in the shadow of the high, wild and blackened cliffs. After having examined these cliffs, we commenced an ascent under fairly easy circumstances. The foothold, however, was rather slimy and slippery due to the water constantly trickling down from the glaciers. We found several anemones and the yellow poppy of Greenland. I was astonished to discover wide spaces covered with the dwarfed whortleberry. These small shrubs, not in flower at that season, appeared more like rose-coloured grass than anything else. Such a sight as this is not

often encountered, and is only to be seen where there is almost a complete absence of animal life. We found traces of hares, reindeer and musk-bulls, none of which, however, was fresh.

Entering a valley which enabled us to scale the side of the mountain forming Cape Hold With Hope, we saw before us nothing but grey heaps of rubbish quite bare of vegetation. Manifestly it was quite useless to continue this fatiguing climb, so we returned on board.

The mist, which had hidden the earth from us during the morning, had disappeared; the sky was radiant, and after having passed between two stranded icebergs, we swung clear of land ice at six o'clock and continued coasting. That was a dream passage! The evening was beautiful beyond conception; the sky very clear. What clouds there were, lent just sufficient light and shadow to render mysterious the mountains before us. The channel ahead seemed like an inland sea. To the larboard was the land with its ice fringe, while to the starboard a calm blue sea spread before us, its surface broken by a few icebergs and several spacious floes. Between us and the land were four or five large icebergs, which, from a distance, resembled towering mountains. In reality they

were only sixty or seventy feet high. One may well ask where these gigantic masses of ice come from, because, according to my knowledge, there is no glacier in northern Greenland capable of producing such seracs. One assumes that they part from the great glacier in the Franz Joseph Fjord, float through the canals and become stranded on the higher points of the coast during the winter.

Before us to the north-west, forming a black band across the ice about Cape James, appeared Jackson Island. Behind it rose the summits of Clavering Island; below these mountains sparkled the glacier of Tyrol Fjord, which extends far into the interior.

To the north-east a white mass, five thousand feet high, rose to the clouds; it was Mount Saddle crowning Wollaston Foreland.

The sun sank towards the ice covering Gaël Hamkes Bay, dyeing with crimson the mountain snows, and producing truly marvellous effects. The sea, still as a lake, gurgled in our wake as we went crushing through the ice. I observed several ducks and sea-swallows circling in the air, flashing downwards now and then on their prey. A few seals rose, breaking the smooth surface of the water into large concentric circles. Only with difficulty was I able to

tear myself from this magnificent view, but it was already midnight. We made fast to land ice, and I retired, after thanking God and the Virgin for having watched over us and brought us safely through the perils of the Greenland seas.

The following day we sought to continue coasting to Wollaston Foreland, a passage which, under normal conditions, presents little or no difficulty. An enormous, far-extended ice-field, however, barred the way on this occasion, threatening to drive us aground. For three days we were compelled to skirt this ice-field, feeling our way through thick mists and harassed by a south-easterly wind which had arisen to dispel the fine weather we had so far enjoyed.

Tuesday, July 1, the weather cleared. We were again able to see Mount Saddle and the Wollaston Foreland, and we set our course for Sabine Island.

A fjord, called the Gripper Roads, separates Sabine Island from the foreland, and here we discovered another group of trappers.

Slowly we neared the land, the black and rugged heights of the Sabine and Pendulum Islands growing more and more distinct, while far away on the horizon, a dark speck, was Bass Rock Island. Away to the left we obtained a

glorious panoramic view of the coast, extending from the north-east point of Wollaston Foreland to Cape Hold With Hope, the whole dominated by Mount Saddle.

The cold was intense. Innumerable icicles hung from the rigging, and each lurch of the ship brought a shower of them to the deck with a noise like grape shot. We were compelled to cover our ears to protect them from frost-bite. At ten o'clock the canal was still ice-free as far as the open sea. The wind was sufficiently favourable for us to make use of our topsails.

Soon we were close to the north-east point of Wollaston Foreland. This elevation is of basalt formation and falls sheer to the bay. From one of its sides two secondary glaciers slope right down into the sea. Half-way up there is an elevated plateau strewn with grotesquely shaped rocks. Away in the distance the craters of Mount Saddle jag the skyline. The glacier extends the whole length of the mountain. In shape it greatly resembles a perfectly white saddle, the culminating point of the mountains representing the pommel.

Before us the rugged heights of Sabine Island rise from the ice of the Gripper Roads in a series of slopes and plateaux. Still nearer, Walrus Island to the right falls gently towards

the ice-locked bay, whilst on the other side it is a basalt cliff washed by the sea.

We approached the land cautiously. I studied it from the bridge, scrutinising every rock and hollow in the hope of discovering either a bear, a bull, or a walrus. A grotesque mass suddenly attracted and held my attention. I studied it through the binoculars, and to my immense astonishment discovered it to be a wooden house surrounded by casks. I pointed it out to my companions. Our disgust was inexpressible. We had come to lands reputed to be uninhabited, and yet wherever we turned we encountered civilisation, or that which served to recall civilisation to our minds. At first we thought a hut had been erected by the trappers of some hunting expedition, and was now abandoned. Our delusion was not long-lived, for while I still watched, a man emerged from the hut. Humanitarian considerations compelled us onwards. There were human beings on the island. They might be shipwrecked sailors or, even were this not so, they might be sick men requiring medical attention. Charity compelled me to go ashore to investigate and place my services at their disposal.

Mérite was busy in his cabin, and thought I was joking when I entered and announced the

news to him. On ascending the bridge, however, he was compelled to agree that there was a house on the island. He nevertheless persisted in his belief that it was unoccupied. Indeed, as the man had now vanished, and I could find no other trace of life on the island, I began to think I had been the victim of an optical illusion. A fresh discovery increased my uncertainty, whilst, at the same time, it caused me delight. In a distant hollow, where a few scanty herbs struggled hard for life, I saw a musk-bull feeding. This time there could be no doubt. At last fortune had favoured me by revealing to my eyes a live musk-bull! I longed to add it to my trophies. Short-lived indeed was my joy; the glasses fell from my hands. For here, in this far-off, desolate and uninhabited land, a domestic musk-cow was calmly feeding. Behind it trailed a long rope as it moved leisurely towards the hut. The man I had first seen suddenly reappeared and commenced hauling up a flag. The irony of it! The man commenced to lead his cow home, undoubtedly that he might milk it and welcome us with a glass of fresh milk when we disembarked. Here was a model farm in Greenland! Try as I would, I could not dissemble my intense disappointment. I vowed I would write

a book entitled 'Tartarin in Greenland.' Farewell, then, to my fond illusions; farewell also to my hopes of discovering bears, walruses, and wild musk-oxen! The latter had been domesticated; the former must have all been destroyed or have disappeared inland before the warfare waged on them by man. The devil take these salaried slaughterers—and may Saint Hubert pardon them!

The motor boat was now ready. Joe, Mérite, Swensen, Rachlew, Louis and myself started shorewards, to the spluttering, jarring music of the engines. Thus we progressed *en prince*. But motors are not to be relied upon in these regions. Hardly had we covered a few cable lengths before the engine broke down. Happily I had taken the precaution of having a boat in tow, and it was the boat that now towed us to the land ice, where we disembarked between two huge stranded icebergs. A reliable motor for navigating this world of ice is still to be invented. In the meantime, I prefer to trust myself to stout Norwegian arms and oars!

We found the ice thin, rotten towards the shore, and covered with gaping cracks, through which the currents ran swiftly. The slightest slip would have been serious in the

extreme, so we progressed cautiously until the ice, becoming firmer, enabled us to advance more comfortably.

A man, attired in black trousers and a blouse, came towards us. It had been impossible to identify the flag flying above the hut, and we had, therefore, been unable to learn his nationality. We wished him 'Good-day' in Norwegian and he replied in the same language. We learnt that he was a Norwegian from Aalesund. He appeared to be about thirty years of age, was well set up, possessed very expressive blue eyes, and brown hair. It was easy to see that he had just finished shaving himself in order to receive us. He informed us that he was one of seven fur hunters from Aalesund, and that they had wintered in the house before us. They had landed on July 3, 1908.

Two of them, their employer and one of the men, had been killed on the 12th of the preceding May whilst bear-hunting. They had been tempted to follow a bear over rotten ice. The ice sundered beneath them, letting them into the water. Their companions had found it impossible to rescue them, and they, finding it beyond their power to regain firm ice, had remained clinging to the edge until merciful death had come to release them.

I enquired whether any of the survivors were ill, and was informed they were all in excellent health. A little snow had fallen during the winter, but the glass had on no occasion registered below thirty-eight degrees. The bay had remained ice-free until Christmas, and throughout the winter the sea had been clear.

On the other hand, the trappers were by no means satisfied with the result of their expedition. They had killed only four walruses, forty white bears, from thirty to forty foxes, and twenty musk-bulls. In the beginning of the autumn they had driven into a swamp and taken alive five calves. These calves, being extremely rare, obtain high prices, often selling at fifteen hundred crowns.

Unfortunately their provisions had run short during the winter and they had been compelled to kill four of these calves. Their despair at this loss was almost comical. The man who related it to us was not to be consoled, and returned to the subject constantly. They had been so foolish, it transpired, as to endeavour to ship the calves to Iceland towards the end of September. The passage, however, had proved so difficult that after two days they were compelled to turn back.

We went together to the house standing

about a thousand yards from the place where we disembarked. Our guide informed us that his companions were walrus-hunting off Shannon Island. How delightful it was for me to learn this you may well imagine! I was destined, it seemed, everywhere to encounter men whose sole business in life was to slaughter all animals worth hunting. Four years earlier, at Cape Bismarck, I had been compelled to stand and watch the men of the *Soestrene* make carnage among the walrus beneath my very eyes.

Approaching the house, we passed several caches built of stones, probably containing grease or skins. We saw a beautiful little canoe fitted with new paddles. The trappers, having lost their own, had borrowed this from the depot established on Bass Rock by the Ziegler Expedition. They also possessed fishing nets, with which they had taken two tons of salmon from Clavering Fjord.

The house was square. It was constructed of wood and paper, the corners being protected against the wind by bull skins. Altogether it lacked comfort, and must have been intensely cold during the winter. In order to escape being frozen, it must have been necessary to remain in bed with the stove constantly at red heat.

The stove was supplied with coal from

Norway, and seal fat. In passing, it is curious to observe that these men who had wintered farther north than Jan Mayen Island had known no sickness. I am convinced this is due to the fact that they had found it possible to obtain fresh meat throughout the winter. The real cause of scurvy is still a mystery, but there is not the least doubt that it arises from an intestinal disorder which it is impossible to combat in the absence of fresh vegetables or fresh meat. I have always made it compulsory on board my ship when nothing else was obtainable, that seal flesh should be served, and I have always set the men an example by partaking of it daily. I have been compelled to do this because Norwegians regard this meat with intense disfavour.

Personally, I have always found the flesh of both the seal and walrus to be extremely palatable, the latter resembling beef. Bear flesh, except that of the young animal, which is excellent, is not so good, but with the exception of the liver, which is dangerous, it is healthy. As regards guillemots, cooked after the Norwegian fashion, they are very good indeed. One of my sailors, named Julius, was a past master in the confection of this dish, which Brillat-Savarin himself would not have

disdained in thin days. The guillemot is carefully cleaned so that no fat remains and it is then pickled for two days. The pectoral muscles, very large in these birds, are then detached. The bird is first boiled, then roasted in butter and served. It is impossible to imagine a more delicious dish, especially when it is seasoned with an Arctic appetite !

The petrel is not edible, and smells disgustingly like carrion ; one might just as well seek to eat a vulture.

During six months of the year it is impossible to obtain any fresh meat at Jan Mayen, for the guillemot and other edible birds migrate, leaving only the petrel behind. It seems to me that this is why scurvy is so greatly to be feared there, while on the coasts of Greenland, where it is possible throughout the whole year to obtain bulls, bears and seals, the complaint rarely appears.

Aboard the *Belgica* I had replaced lime-juice, which the men detested, with whortleberries, which are obtained very cheaply in Norway. The substitution was thankfully received, and I am convinced that fruit, so easily preserved in these regions, will inevitably be included among the essential provisions of future Polar expeditions.



HOUSE OF WINTERERS AT CRIPPER ROADS (GREENLAND).



THE YOUNG MUSK-OX.

Arriving at the house, our guide introduced to us his young musk-ox. The animal appeared to be sulky and stupid. As its Latin name—*Ovis bos*—indicates, it resembles a cross between a sheep and an ox. The animal before us was as large as a six months' calf at home. It was covered with long brown hair. The legs, short and thick, were white from the knee downwards. The head, short and flat, was enormous compared with the body. Its eyes were glazed and dull. Two short horns just made their appearance amid masses of hair. Having inspected it, I asked my host whether one might hope to encounter wild bulls hereabouts. He replied that he had often seen them in a valley a short distance away. After great difficulty (he appeared to be afraid of leaving his calf alone fearing that some one might appear and steal it) he consented to conduct me there. Joe and Mérite would not accompany us, and they remained near the house, promising my guide to keep a keen eye upon the calf during our absence. We (Rachlew, Swensen, Louis and myself) then set out with him carrying our guns and hunting bags. We had to scale a steep acclivity of basalt to gain the plateau, on the farther side of which a second wall of rock confronted us. The summit of this cliff formed a large plateau,

and it was here musk-oxen were often to be found. The bottom of the valley was swampy, and we were compelled to scale the basalt in order to avoid sinking to our knees. Anemones, white and yellow, and small rose-coloured flowers grew in abundance. Some white heather flourished, and there was in abundance gnarled and stunted willows whose long flowers were full of a cotton-like substance. Fragments of quartz and a few crystals sparkled at the bottom of the basalt hollows.

A little dog followed us, jumping up at me in its delight on seeing a new arrival. The poor beast perhaps thought it was to accompany us when we left the island where it had passed so many lonely and uninteresting months.

On an elevation we discovered a trap similar to those we had seen at Jan Mayen. There were many large wolf traps here also, but they had proved useless for their destined purpose. Wolves will not approach a trap and hunters can only shoot them.

Mounting by a very steep pass, we gained at last the plateau which dominated the surrounding valleys. The panorama was superb. From Walrus Island to the northern bay of Sabine Island, the world lay before us like a relief map. The fjord separating Sabine Island from the

mainland was completely frozen. Here and there little islands broke the white surface of the ice. An immense glacier, strangely like some immobilised cloud, sloped from an elevated valley down into the bay. To the west and south wide plains extended, covered with swamps and rivulets. Finally, there were the steep slopes of Mount Saddle, whose snow-covered summit sparkled in the sun like some enormous glazed dome. Sixty miles away to the south-west, distorted by a mirage, appeared Cape Hold With Hope. The air in these regions is so pure that one is able clearly to distinguish objects an incredible distance away.

As regards the sea, the outlook was not reassuring. As far as one could see there was nothing but unbroken ice extending to the skyline in semicircular form. This barrier of impenetrable ice was an adamantine wall enclosing the ice-free lake we had navigated. It shut us off completely from the outer world, and, search as I might, I could find no trace of an opening or canal similar to those which had given us passage-way farther north. It was beautiful, but none the less a prison wall. I estimated that this ice-field, extending from Shannon Island to Cape Hold With Hope, was at least eighty miles long and from twenty to

thirty miles wide. The consideration that we were imprisoned and helpless was not consoling. We were in God's hands, however, and we dismissed anxiety.

Questioning our guide as to what sport might be anticipated on the island, he pointed out to me a valley in which he said he had often seen musk-oxen, affirming that quite recently he had succeeded in shooting four of a herd of fifteen. This might well have been, inasmuch as the musk-ox leaves its higher fastnesses in the winter and comes to the water near the shore. In the autumn it seeks the shelter of the valley at the foot of the mountain. As regards reindeer, our guide had not seen one. He had come across several old traces just as we ourselves had at French Island in 1905.

Ptarmigan, which are very numerous here in winter, disappear in the spring. Finally, he told me that white hares were very numerous, but were to be found in still greater numbers on Walrus Island.

The trappers had built a second hut on Cape Herschell. Had we but followed our first intention of landing there, we would undoubtedly have found good sport.

The hunters had captured alive one blue and two white foxes. I particularly desired to

add a white fox to my menagerie. I asked the guide if he were willing to sell me this specimen. A long palaver as to the price thereupon ensued between him and Rachlew. Terms were finally agreed upon. We then learnt that our guide was anxious to return to his calf. Our attempts to reassure him proved as futile as they were amusing. So we let him depart and continued our march over sodden ground and shale fields until we attained the summit of a hill, from which coign of vantage we were able to inspect the surrounding valleys.

We sighted not a single bull. Nevertheless, the trappers said that they were numerous hereabouts, as was apparent from the fresh tracks of an ox-bull and a wolf we discovered. The only living thing I saw was a skua, a bird very much like a cuckoo, and a harfang (snow-owl) which, erect upon a rock, watched us from a distance. A novice would probably have tried to approach it. Experience of harfang-hunting in Nova Zembla had taught me the folly of such an attempt. I have spent hours and hours in trying to approach the bird without ever getting an inch nearer. So I passed without disturbing it.

The only valley which promised to provide us sport with musk-bulls ran the whole length

of Mount Saddle. To reach it, it would have been necessary to march for another three or four hours through swamps and wide streams. Already we had been away from the ship for three hours, and had been so unwise as to bring nothing to eat or drink with us. We therefore abandoned the idea of entering the valley and turned back to the house, following the cliffs. We saw a snipe.

Before the house sat Mérite making a sketch of the musk-calf. The animal, sighting me in the distance, unexpectedly took it into its head to charge at me. Instinctively I levelled my alpenstock like the 'garocha de vaquero'; then I discovered that the beast had not me for object but the dog following at my heels, who appeared to be its deadly enemy. Despite my awkward situation, I observed that a musk-ox appears, when charging, more like a ram than an ox.

The purchase of the foxes was quickly concluded. A sum of one hundred crowns changed hands, and Rachlew signed a paper undertaking to pay ten crowns more should the trappers find the accepted amount insufficient when they returned from their expedition. The foxes were placed in a box and carried to the shore by our guide.

At the moment of purchase the animals were in a fearful condition, having lost their winter fur, and being half grey. Further, the stench issuing from their cage almost choked one. One would have thought it impossible for any living thing to survive such an atmosphere.

On my way back to the ship I came across a large anchor and chain on the shore. It appeared that when the hunters arrived at the island in July, they had contemplated dragging their vessel ashore. Happily for them the chain had broken. For, had their efforts succeeded, their vessel would most surely have been smashed to splinters by the huge ice-blocks cast high up the beach during the winter gales. They had finally anchored their barque in a creek at Sabine Island, where Koldewey's *Germania* wintered in 1870. As this little bay is open only to the south, the vessel was completely sheltered, and waited only the breaking up of the bay ice to gain the open sea again. Each week the men visited the bay and inspected the ice, so that at the first possible moment the ship might be swung free. The neglect of such an opportunity might have involved the imprisonment of the trappers during a second winter.

Our guide grumbled constantly at the result

of the expedition, affirming that it was a simple matter for a man to earn more money by remaining in Norway. Considering the dangers and privations the trappers must have necessarily endured, the complaint was perhaps not wholly unjustified.

We returned on board at nine o'clock and finally settled matters with our trapper friend, who, having disposed of the foxes, hurried back as fast as he could to keep his eye on the famous calf. The animal was at once his sole pre-occupation and his one hope of gain. I gave him some tobacco and cigars, for which he was most grateful, his own supply having been exhausted a month since. He refused other provisions, assuring me that he had sufficient to last two years at least.

A few hours later we proceeded on our way. We sailed in a world which was like fairyland. A blazing sun lit up the Polar night ; no cloud marred the magic of the sky. We proceeded, taking soundings, in completion of the course the *Belgica* followed in 1905. Without great difficulty we discovered a passage ; once again the ice-fields of Greenland were kind to us !

It was during my return from this voyage in 1909 that I landed at Hope Island, to the east of Spitzbergen, on the day that the Tromsø

hunters were leaving for home. They had killed eighty bears. Another band of trappers on Kong Karl Island killed sixty, but were compelled to abandon the skins because the ice, remaining unbroken, held back the ships sent to their relief. Towards the end of the summer they succeeded in escaping in a canoe, and by good fortune arrived at the Advent Bay coal mines, after having endured terrible sufferings.

At this rate of destruction the Polar bear will, in the course of a very few years, become almost completely extinct, just as has been the case with the walrus, now so rarely to be encountered. The Polar trapping industry will then disappear. It is this consideration which has induced me to set forth my knowledge of the life and methods of bear hunters.

BEARS

BEAR-HUNTING, at least as it is practised during the summer months by a great number of amateur and professional huntsmen in the Greenland and Spitzbergen seas, represents the triumph of keen sight and clever shooting. The ship coasts the ice-fields whilst a man aloft keeps watch. The crow's-nest, indeed, plays a very important part in all Polar expeditions.

When the look-out man observes a yellowish blot, such is the characteristic appearance of a bear on the ice, he warns the ship. On a clear day it is possible to distinguish a bear at a distance of four miles.

A sailing vessel can approach a bear quite closely without alarming it in the least. Very often one can get close enough to destroy it before it has even become suspicious of danger. When the situation of the ice renders such an approach impracticable, the vessel is anchored to the ice-field, and lard and herrings are burnt

to lure the bear. This stratagem frequently succeeds. A bear will almost always approach a strange smell to investigate it. Sometimes, however, it resists the temptation and trots away, in which case one's only resource is to try a long shot. On more than one occasion I have killed bears from a distance of six hundred yards with a Mannlicher rifle, often at the first shot. Indeed, I prefer long-distance shooting at bears, as it gives the animal a chance for its life, and is not mere slaughter.

The approach of a bear, when it is attracted by an unknown smell, or when simple curiosity impels it to some investigation, is a most interesting sight. The magnificent animal, undisputed master of its icy empire, draws slowly near, every ten yards or so rising on its hind paws and snuffing the air precisely to locate the smell; or it crouches on a hummock and surveys the chaos of ice around it. Sometimes, like a cat, it crouches behind a rock permitting only its muzzle to be seen, which from time to time it covers with its paws, as though to hide the part it knows to be visible. I remember one night, when we were imprisoned in the Kara Sea, three bears, a mother and its young, were unexpectedly discovered roaming over the ice about the *Belgica*. The August midnight

sun was already mounting the horizon, twilight reigned, and in that twilight the animals assumed fantastic dimensions. Save for the cracking of the ice, deep silence prevailed. The bears in moving made no noise at all, and the sight of the three spectral figures, sliding noiselessly to and fro amid the hummocks, would have delighted the soul of an artist. It certainly gave me more pleasure to watch than to shoot them !

When the ice-field on which the bear is sighted is a small one, an attempt is made to frighten the animal. Surrounded by water, terrified by the man, the bear in desperation plunges into the sea, and from that moment it is lost. The men follow it in a boat, and a ball in the beast's brain terminates the affair. There is no danger of losing it, because the carcass of a bear does not sink unless the animal is exceptionally thin.

To come to close quarters with a bear on an ice-field is a very difficult matter. It takes to flight as the boat approaches the ice. Sometimes it sets its course along the edge of the ice, and then, if it encounters an ice-cape, instead of avoiding it, it enters the water and is easily slain. If, on the contrary, it makes for the interior, to try and overtake it is useless. Above all, this is



A VISITOR (GREENLAND ICE BANK).

so in summer, when the snow covering the ice is soft and intersected by numberless small lakes and crevices. I well remember my first and last chase of a bear over the ice. That one experience was sufficient in itself. The incident occurred off Greenland on July 9, 1905.

At nine o'clock in the morning we touched an ice-field whose limits were invisible, and tied up to it as to a quay, with the object of establishing an oceanographical station. To the south and west the sea was ice-free, while to the north, as far as one could see, extended a white plain broken here and there by grotesquely shaped and strangely coloured elevations. Small lakes, pure blue in colour, relieved the gleaming whiteness of the snow, a blazing sun lit up the whole landscape. The man in the crow's-nest signalled a bear. It was the first we had so far encountered, and its appearance naturally occasioned great excitement among us. We were told that the animal was quite close to us, but although I mounted the bridge I could not obtain a glimpse of it. The ice hummocks were both numerous and lofty, and it was easy for the bear effectively to hide itself among them. My old huntsman Jonas, however, affirmed that he could locate it, so we left the ship. Récamier and myself accompanied him,

fully armed and ready for the struggle. These were days when we believed a bear would turn upon the hunter !

The snow was deep and soft ; we were advised to take skis, but having had no experience of them, Récamier elected to take snow-shoes, and I followed his example. All went well at first ; the snow-shoes bore us well. Very soon, however, we arrived at a spot where the drifting snow had become loose and powdery. Jonas, on his skis, went forward without hesitation ; we sank almost to our waists. When we sought to withdraw our legs, the snow-shoes became scoops heavily weighted with snow. To progress thus was fatiguing in the extreme ; we splashed onwards desperately, perspiration streaming from us. Had the bear turned on us at that moment we should have proved very easy prey. But there was no sign of a bear, nor even traces of one, so Récamier and myself sat down to rest on an ice-hill, whilst Jonas went to reconnoitre. The man in the crow's-nest aboard the ship signalled to us, but we could not understand his meaning.

After some time Commander de Gerlache glided up to us on skis, and informed us that he had located the bear. He indicated the line we were to follow, and again we went

splashing onwards. Still our quarry remained invisible and again we mounted a hummock to prospect.

A chaos of ice extended before us until lost to sight, and in whatever direction we turned we could distinguish no traces of a bear, or rather, I should say, fresh traces, for of old ones we discovered many, and even the spot where our bear had killed a seal.

The Commander had gone in advance and overtaken Jonas, who now appeared away to the left. We thus, as it were, formed a semicircle of beaters, covering a wide area, yet seeing nothing.

Jonas rejoined us after a time and said that he had seen the bear in the distance, and that, after hiding a seal which it had commenced to eat, it had trotted off towards the interior. Disappointed we returned aboard.

It was two o'clock, and we had been on the ice since nine o'clock. We were soaked with perspiration and icy water. Reflecting that the bear had breakfasted, we deemed the example excellent and sat down to table. During our repast, those who had remained on board gave us graphic accounts of what had been seen, each one after his own fashion.

Their recitals were both curious and varied.

Everyone had seen the beast quite close to us. Some even had seen the beast charge the Commander, who had fled towards me. In fine, everybody had seen the beast except Récamier and myself, who still remained rather incredulous. When we rose from the table, however, we were compelled to bow down before fresh evidence: distinctly outlined against a high hummock was a yellow blot, which, through the binoculars, I discovered to be unquestionably the bear so vainly sought.

It had come to a halt far beyond the edge of the bad ice. Instantly our weariness was forgotten, and again we bravely set out. This time we wore those long wooden strips called skis, which of late years the people of the Alps have been importing from Norway. To say that ski-ing is an accomplishment easy of acquirement is to exaggerate. Venturing on them for the first time, one appears neither very elegant nor very much at his ease, particularly on the rugged surface of a Polar floe, which resembles nothing so much as a snow-field, liberally besprinkled with boulders and miniature mountains. It is an unfortunate delusion with most beginners that ski-ing and skating are identical. The precise difference between the two is that with skis one glides forward without lifting



TRAMP ACROSS THE ICE BANK
IN SUMMER.



WOUNDED BEAR.

the feet, while in skating, the feet must of course be raised. To endeavour to skate on skis means inevitable disaster. My own first efforts were attended by numerous falls. In fact, I found it almost impossible to pass the many small lakes formed by the melting ice without becoming quite intimately acquainted with them. I fell into one of them so completely entangled in my skis, that I was submerged altogether. Fortunately, the three thick jerseys I wore prevented my suffering any ill-effects.

Particularly difficult were the ascents and descents of the ice hummocks, but we contrived to advance without vanishing into any of the snow crevices, and our progress was fairly rapid, all things considered.

We reached the ice-block near which we hoped to find the bear. After a short search I discovered newly made tracks and the remains of a seal. At the same moment I perceived the bear itself, restlessly roving amid the hummocks a little distance away. It snuffed the breeze, sat down, then rose on its hind legs and examined the ship. Five hundred yards only separated us from the beast.

Récamier posted himself in the track of the bear to prevent it escaping should it double,

whilst I, accompanied by Jonas, who carried my (.577) gun, stole cautiously forward. Due to the fact that the bear was constantly changing its position amid the ice, our approach was easy. Wishing to get beyond the wind, we commenced to skirt some piled masses of ice. This led us, however, to soft snow into which we sank up to our hips, and when we regained firm ground it was to see the bear leaving us at a trot, looking back from time to time.

Jonas instantly began to shout at the top of his lungs and to wave my second gun in such manner as to render it quite impossible for me to fire, inasmuch as he was between the bear and myself. The only opportunity I had of firing was when the beast passed between the ice hummocks away to the left. I sent a ball after it, and Jonas discharged my heavy hunting gun, the recoil of which knocked him flat in the snow. The bear disappeared. A short time afterwards I again saw it ascending an elevation. Again I fired, and again the bear disappeared. Approaching the spot where I had last seen it, I searched thoroughly, but vainly.

Récamier came up to me. Together we clambered to the top of a pyramid of icebergs, but could find no bear. It had vanished completely, mysteriously, the thawing ice not

preserving its tracks. The labyrinth of hummocks was so intricate, and the crevasses so dangerous, that an exhaustive search was impossible, so after a time we returned to the ship. Everyone on board was able to confirm our statement that the bear did not reappear after the second shot. Possibly I had wounded it, and it had taken refuge behind a hummock, while we, no longer seeing it, had concluded that it was lost, whereas it may have been close at hand all the time.

The experience I subsequently acquired has given me more confidence in myself. I should have sent men ashore to make a methodical search, and had I done so I am convinced the bear's hiding-place would have been discovered.

Jonas explained the noise he made when he perceived the bear running away. Often, he told me, on hearing these cries, a running bear will stop to discover the cause of the noise. This may indeed be the case, but in the present instance quite the contrary held true.

It was nine o'clock at night. For ten hours we had been splashing through water, clambering over ice hummocks, and marching through snow. Our extreme weariness, therefore, was not

unnatural. None the less, we remained for a considerable time on the bridge admiring the beauty of the view. I think I have never seen such coloration as on that night. The large ice hummocks were tinted to rose, resembling the sand dunes of a desert or the Gordas Arenas of Andalusia. Above, the western sky presented a gamut of greens, and behind us, from the bosom of the dark restless sea, rose plain against the sky a series of ice-floes which the sun kissed to pure silver. Seals came to the surface about the ship, but as they were small we made no attempt to capture them. Altogether it was a spectacle never to be forgotten.

During our absence an oceanographical examination had been made: soundings and temperatures had been taken, fish examined, etc. For all of us the day had been interesting, but I retired regretting the bear skin I had lost. Never since that occasion have I attempted to shoot a bear in the same way. When a bear has not approached sufficiently near to permit me to fire from the deck, I have always landed men to corner it and force it into the sea.

The most efficacious way of hunting bears in the ice-field or over land ice is to set dogs after them in the spring, when daylight reigns, and the snow holds well. Many are the bears

Swerdrup and Jackson have killed by driving after them in a horse-sledge.

The bear, after having run a short distance, halts with its back to a hummock and charges the dogs singly. This permits the hunter to approach and fire at his ease. The only risk is that he may shoot one of the dogs as well as the bear. This is identical with the custom of sending a puppy after a wild boar, a method much resorted to in the Forêt d'Eu when I was a child. Beaters drove the boar from its lair and a terrier was then set on its trail. After the first moment of terror, the boar, seeing only the dog, and desiring to rid himself of so insignificant an adversary, turns and charges, thus giving the men time to approach within range.

As regards hand-to-hand struggles with bears, I am unable to say whether they have been of frequent occurrence in times past, but I am in a position to affirm that during the summer such encounters are altogether unknown. If a bear has the chance it always runs away. Female bears in young save themselves in the same way.

In August 1905, when returning from French Land, on nearing the coasts of Greenland I saw amid a maze of ice-hills a female bear with its

cub, both busily tearing a seal to pieces. Thanks to a mist that hid us from their view, we were able to bring the *Belgica* up to the ice and land several men, who, led by Bergendhal and Récamier, detoured the hummocks and crevasses which surrounded the animals. I, being convinced that if the bears were disturbed they would plunge into the sea, stationed myself in a boat, and hidden from sight by the sides of a wide ice canal, awaited events. Due to the heavy mist I could not follow the fortunes of the chase. After an hour's wait a rifle shot, followed by a savage snarling, disturbed the stillness. At that moment I caught a glimpse of the flying bears, vague and ill-defined because of the mist.

Mérite and I, running as hard as we could, followed the edge of the ice. After negotiating a cape formed by a high green and blue iceberg, I again saw the bears ahead trotting rapidly, parallel with the sea. A human shout rang out in the mist before them. The bears halted, hesitated a moment, and then determined to cross the wide canal. They plunged into the sea but a few yards from us.

The mother jumped first, her fore-paws almost joining above her head. The cub followed quickly, and supported itself by holding on to its

mother's head. They swam vigorously, the mother from time to time turning her head towards us, growling and snapping when it perceived the boat overtaking it. Mérite photographed the couple from every possible point of view ; then, as they neared the neighbouring floe, I deemed it was time to finish the business, and, permitting them to get well in advance, fired and lodged a ball behind the mother's ear. She stretched herself full length in the water and remained motionless. The cub plunged forward. A few seconds later, without having removed my gun from my shoulder, I shot it also behind the ear.

The most remarkable thing I observed during the chase was the presence of a large number of petrels, who circled in the air above the heads of the bears as though they already regarded them as certain prey. Hardly were the animals dead before the birds settled on them, and commenced feeding on the blood and fat that escaped from the wounds.

When the siren had called the men aboard, I learned that the battue had been conducted without difficulty. Bergendhal, stumbling on the bears hidden behind a hummock, had fired into the air and frightened them. The animals fled away to the right, where a sailor confronted

them. As soon as they saw him, they again turned and fled directly towards the spot where Récamier awaited them. He again turned them back, and they then made direct for the water without even having attempted to break through the line of beaters.

I have had no experience of bear-hunting during the winter, but, as far as I have been able to gather, they are certainly very savage and aggressive at that time of the year. One reads of the adventures with bears of Swerdrop, Nansen and other explorers. Again, when the Koldeway expedition was wintering in Iceland, a bear attacked Dr. Börgen and dragged him for more than two hundred yards over the ice. The savant owed his life to a thick hood he was wearing, which prevented the bear from crushing his skull as if it had been a seal's. The doctor's companions, hearing his cries in the night, came up in time to frighten the bear away; but nevertheless the unfortunate doctor was well-nigh scalped.

There can be no doubt that under certain circumstances bears will attack human beings in winter, but only once have I seen a bear turn upon its hunters in summer, and then it was because the bear had been wounded in the belly and could not run.



A DOUBLE COUP.

On July 7, 1909, sailing with difficulty between enormous bergs, we attained latitude 73° . I had just mounted the bridge after having entered up my diary, when the steersman informed me that he had seen a bear on an iceberg directly ahead.

I told him to hold the course, and when towards midnight we arrived alongside the berg, we found not one, but three bears. Two of them, occupied to the exclusion of all other things, were crawling towards a group of seals, who remained quite unconscious of their danger. The third, near the edge of the ice, was standing in water which reached half-way up its legs, tearing to pieces the carcass of a seal. I directed the man at the wheel to steer directly for this latter bear, and for a time our approach was unobserved. Unfortunately, the steersman, instead of avoiding the small ice covering the bay, sailed straight through it at full speed. The grinding and smashing of the ice alarmed the bear. I saw it raise its head to examine us and I hastened on to the forecandle to fire as soon as we were within range. The bear was still a hundred yards away to the larboard, when, striking a submerged berg, the ship swung completely, so that the bear was then to the starboard. I ran across the forecandle, and was

just in time to see it trotting away as fast as it could. Although the beast was already at some distance, I levelled my long-range Swiss rifle and opened fire. The firing, however, was difficult ; the ship, bumping constantly against the ice, again and again spoiled my aim. Meanwhile the bear, keeping its back turned to me, appeared and reappeared amid the ice hummocks. None the less, I contrived to get at least one shot home. The animal rolled convulsively in the snow, then rose again to continue its flight. Now, however, it left behind it a trail of blood. From time to time it stopped to lick its wounds. Swensen, in the crow's-nest, was the last to see it, and stated that it had disappeared behind a large ice-hill. He was very eager to go and finish it off ; I was, however, reluctant to risk the lives of the men at this part of the field where the ice was rotten and dangerous. Still, none of us desiring to lose the bear, we sailed for the farther side of the berg.

The Captain hoped the animal would take to the water and cross the canal separating the two bergs. But I was convinced that, wounded as it was, it would never risk such a passage. We surmised that my ball had lodged in its stomach. Everyone on board had seen the blood gush from above the right haunch, and

the ball, of too small a calibre to break bones, must have passed right into the beast's vitals. I thought it better in this case to follow the course adopted by a huntsman when he similarly wounds a stag or roebuck : that is, not to follow up the wounded beast immediately, but, as they say in Austria, 'Le laisser devenir malade.' Even a badly wounded bear will run so fast, if one approaches too quickly, as to render the hope of overtaking it futile. If, on the contrary, it be left quite alone, it will lie still while its wound becomes gangrened ; peritonitis then quickly seizes on the poor beast and renders flight impossible. Unwise precipitancy had already lost us our bear in the Kara Sea, which I had shot from the bridge of the *Belgica* at a distance of more than five hundred yards, when it came trotting ahead of two sailors, who had disturbed it on their way back to the ship from seal-hunting. At my first shot the beast came to the ground, writhing and tearing at the air with its claws. Just as we were assuring ourselves that it was mortally wounded, it arose and resumed its flight. The bullet, judging from the blood running from its head, had ricocheted across its skull. I sent a second shot after it from a distance of one thousand yards. The shot found its mark.

The bear stopped and revealed to us a second patch of blood on its right paw ; but this fresh wound, instead of bringing it to earth, seemed to give it fresh strength, and it vanished over the ice at a swift trot. Commander de Gerlache followed the flight from the crow's-nest, and informed us that the beast halted a second time, and again resumed its trot. It is possible the bear heard the approach of the two men I sent after it at speed, following the blood tracks. Hearing them it contrived to escape. I am convinced that had it been left to itself for a few hours we should easily have overtaken it. In the morning Récamier, Bergendhal, and Ottersen endeavoured to locate its whereabouts, but all trace of it had vanished in the melting snow. We were all thankful to regain the ship without accident. We had found the ice in a very bad condition, and all of us had successively fallen into snow crevasses or into the canals we were compelled to cross, which ran swiftly, and threatened to draw us beneath the ice. But for Ottersen, who showed us how to cross these canals by making stepping-stones of floating ice-blocks, we should probably not only have lost the bear, but more than one of the men.

I have related this incident at length,

because it serves to explain the course I adopted when I wounded this second bear in Greenland. After having assured ourselves that it had not escaped by swimming, and must necessarily be hidden amid the hummocks among which it had disappeared, we anchored for the night alongside the floe on which the other two bears still roamed in search of seals. We burnt fat and grease to attract them, but vainly, and at five o'clock in the morning we retired to rest. Towards midday we cast off and sailed to double the berg. *En route* I killed at three hundred yards a magnificent female bear which had swum out to an ice splinter. It was not, however, the bear of the preceding day, because it bore only one wound; the one behind its shoulder which caused its death. Most probably it was one of the two animals we had watched for throughout the night, while they themselves were in turn watching for seals.

Meanwhile a mist had arisen. Notwithstanding this, the man in the crow's-nest suddenly sighted a bear amid the hummocks in the direction taken the preceding evening by my wounded bear. We watched it for a long time and finally saw it hide behind an ice-hill. It was impossible for the *Belgica* to approach the ice-field because of the presence of numerous ice-blocks which,

driven shorewards by a fresh south-westerly wind, threatened to crush us flat. There was nothing for us to do but to resort to the expedient of again burning herrings to attract the bear's attention. Failure rewarded our efforts. The animal remained behind its hummock, moving only to bathe itself in a pool or to roll itself in the snow. The beast's actions confirmed my suspicions that it was the bear I had already wounded.

Swensen, however, disagreed with me and requested permission to go after it. He embarked in a canoe, taking with him Hans and Ottersen. We on board followed the pursuit through our glasses, and very quickly regretted that we, too, had not accompanied them. We saw the men disappear amid the hummocks and surround the bear without disturbing it. Then they essayed to drive it towards the sea, by openly advancing towards it. But though the bear saw the men, instead of running, it turned on them. Ottersen, who was nearest, fired his rifle in the air, hoping to frighten it. The bear was not to be frightened. It came straight for the men, and at eight yards Swensen was obliged to lodge a ball in its neck, which did not, however, kill it. Swiftly it turned and charged Hans, who was behind a hummock.

Again Swensen fired and finished the beast with a second ball behind its shoulder. The three surrounded their victim, manifestly exceedingly proud of their achievement. They skinned it while I sent a boat to bring them back, because the wind, piling up ice against the ship, made the situation threatening.

The skin was extremely large, the hair pure white. The doctor examined it. There was a hole in the right paw which evidently had been made by a bullet of a small calibre. The edges of the wound were already gangrened, and the doctor affirmed that the wound was several hours old. The Captain's bullets had made large holes, the edges of which were still moist with blood. Further, Ottersen, when questioned, said that in skinning the bear he had observed the intestines to be black and perforated. Altogether it was undoubtedly the bear I had wounded the preceding night.

Swensen was profuse in his apologies at having been compelled to fire instead of driving it into the sea, and so affording me an opportunity of shooting it. I, however, complimented him upon the excellence of his tactics and the sangfroid he had displayed when the bear turned upon him. He informed me that never before had he seen a bear charge a man in such fashion ;

the manner in which it had acted, when the three men first appeared before it, had amazed him. At first he had not suspected that it was wounded, and had been at a loss to account for its surprising ferocity.

The day had passed quickly, and we had had excellent sport. The bear was an old male, probably the oldest I have ever killed. Its fur was magnificent, the hair being very long. Its head, measuring almost twenty inches, was characteristic of old male bears, the nose being very hard and turned. From its left eye to its ear was a long cicatrice, probably the result of some hard fighting with its own kind. The teeth were very long and discoloured : another sign of age. The teeth of the female I killed earlier in the afternoon were extremely white.

When a bear takes to water, the course usually adopted is to follow it in a boat and shoot it in the back of the head. In this way one runs no risk of spoiling the skin. This method is practised by the Norwegians, and is one which generally presents little or no danger, for the bear swims straight ahead, rarely or never attacking the boat. When, in far-off days, it was customary to go bear-hunting armed only with lances, it very frequently happened, if we are to believe the older writers, that a wounded

and maddened bear would often turn and destroy the pursuing boat. G rit de Vere relates an instance when a wounded bear clambered up over the stern of a boat, compelling the sailors to throw themselves into the sea. Nowadays, the hunter who is armed with a good rifle and preserves his sang-froid, runs little or no danger, even if a bear rendered furious turns on him.

It is frequently possible, in a sea-lake almost free of ice, to pursue and shoot a bear without leaving the ship. Several times during my last voyage I achieved this in the Barentz Sea, where icebergs are rarely encountered. Where, however, channels are narrow and bergs are numerous, it is quite another affair. Bears swim, dive and cross the ice with such rapidity that no vessel can follow them. Unless the animal is brought down with a long shot at a moment when it is crossing a berg (a by no means easy matter!) it escapes.

I have given chase to and shot many bears from the deck of the *Belgica*. It is risky sport, however. One cannot handle a ship with the same ease as a small boat. And so, while I have on many occasions shot a bear on the ice at five hundred yards, when firing from the ship at a swimming bear I have always been compelled to double to head it off. I well remember an

adventure I had with a bear in the Franz Joseph ice-field. The animal dived and swam so well that at one time I regarded its escape as inevitable. Over confidence had led us to make a false manœuvre. We were sailing across a series of large, mist-shrouded lakes. Large icebergs were completely absent ; small floes measuring from ten to twenty yards surrounded us. Suddenly a sailor in the bows observed a bear some four or five hundred yards away, swimming for the ice. We instantly pursued it under full steam, but the animal was surprisingly quick, and it was as much as we could do to gain upon it. To the despair of the photographers on board who desired to photograph the bear in the water, I tried a long shot, but missed. Afterwards I was compelled to wait patiently, rifle to shoulder, the moment when my enthusiastic friends should have made their exposures. It was then that the bear adopted tactics with which we were quite unacquainted. It dived suddenly to reappear fifty yards away. On coming to the surface, it turned to regard the ship curiously, splashed the water a little and dived once again. In spite of this stratagem we contrived to overtake it very quickly, and I made ready to fire, but was once again prevented by Mérite, who desired to make still one more

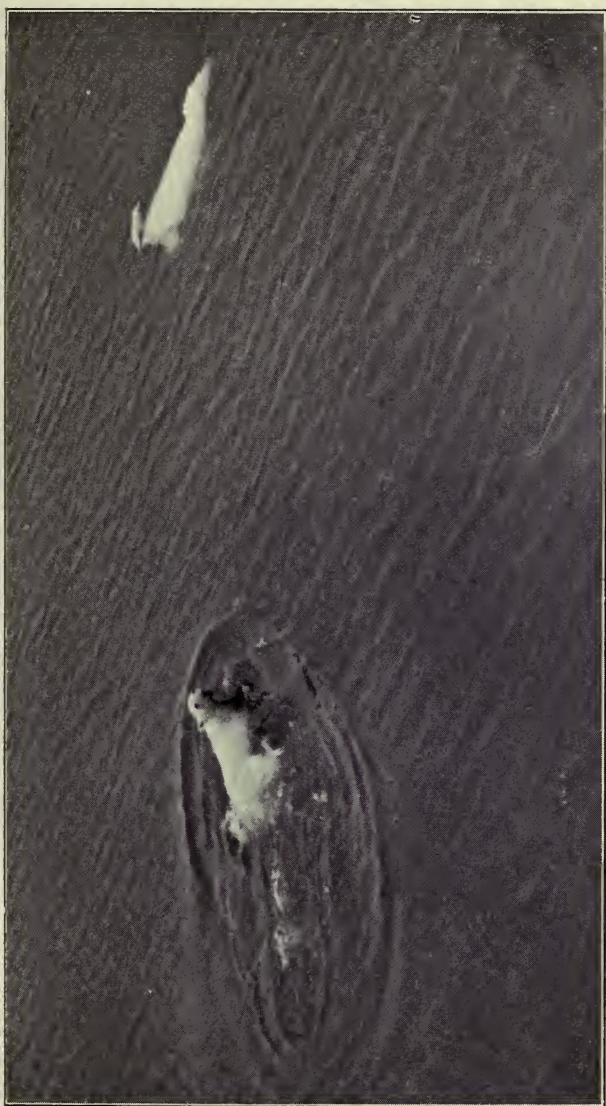
exposure. It was too late when at length I was permitted to fire. A clinging mist shrouded both ourselves and the bear and as a result we overran the animal, which resumed its flight in the opposite direction. It was no simple matter to 'bout ship, surrounded with ice as we were, and by the time we resumed the chase our quarry had gained an enormous iceberg. I tried several long shots without success. Again and again the bear took to the water, swimming beneath the surface, barely allowing itself time to breathe. It clambered with wonderful rapidity over the ice it encountered in its flight. Swensen was at the wheel, and he handled the ship magnificently, avoiding the larger ice masses and fending away the smaller ones. Finally we drove the bear on to less broken ice surrounded by the open sea. This renewed our hopes, the bear having become exhausted by constant diving and swimming beneath the surface. This time I was sufficiently wise to disregard the pleas of the photographers, and when we came within range I fired and killed. The bear, when brought aboard, turned out to be a young female three or four years old, and although not very large it had certainly provided us with excellent sport.

There are few things more difficult than to

shoot a swimming bear from the deck of a ship steaming at full speed. The only vulnerable point it presents in the water is the back of its head. A bear, when swimming, keeps its head in constant motion, and when diving is yet more provoking ; for, impelled by some indefinable instinct, it shows no more than its hind paws at the precise moment the marksman feels confident of being able to plant a shot behind its ear. A bullet fired too low ricochets over the surface of the water, committing no more damage than perhaps to tear and spoil the skin.

During the afternoon Swensen shouted that he saw a second bear in the water, the mist having risen a little. As there was practically no ice in sight, the bear's chance of escaping was very remote. I therefore permitted the photographers to mount the fore-castle with their cameras, while I remained on the bridge. The animal, to me, appeared to be a large one.

I fired when it was within range, aiming between the shoulders. My rifle was an American one of very small calibre, it is true, but none the less very deadly. The bear roared and turned towards the ship, its fore-paws spasmodically beating the water, which became dyed with blood. I felt confident that I had



HALLALI!

experience I learned that the one vulnerable point of a swimming bear is its head.

Throughout the summer the bear wanders over the ice seeking the bergs on which the seals congregate; exactly how it passes the winter is unknown even to-day. It has been established beyond question that female bears in the Arctic regions, particularly when they have a new-born cub, hibernate in a retreat which they construct by permitting falling snow to settle upon them until it forms a thick crust about them. These miniature caverns communicate with the outside world by one opening only, which the animal keeps clear for respiratory purposes.

That celebrated hunter, Tobiesen, has described one of these cavities into which he accidentally fell, to his own great discomfiture and the alarm of the inhabitants.

Twice, Jackson, in the course of the winters he passed at Franz Joseph Land, discovered female bears enclosed in similar little snow houses which they could not have left for several weeks, seeing that there was no other exit but a small hole for ventilation purposes. The bears were alone with their cubs.

Male bears which winter on the ice-fields (it is certain, at least, that a great many of them

do so) hunt seals as in the summer. On the other hand, it is possible that many male bears imitate the example of the females, hibernating in grottoes of their own construction. Nothing certain is known regarding this, however.

During a seal hunt amid the ice of Kara, Récamier found at the foot of a line of hummocks a cavity, the inner walls of which were covered with hair. It was unquestionably the hair of a bear. The cavity, which possessed a wide exit, was empty. It was, in fact, nothing more than a large niche in which a bear had sought shelter during the intervals elapsing between its expeditions in search of food. The thaw had not affected it to any marked degree, although it was not discovered until the end of August.

Bears find the struggle for existence very hard during the winter, when seals and the birds on which they prey are very scarce. This must be so considering how fat a bear invariably is towards the end of the summer, while in the spring it is always amazingly thin. One surmises then that starvation superinduces that ferocity which bears display at the latter period of the year. The fact that hunters have only been attacked by bears during the long northern night or in the spring-time, seems to establish this beyond question.

I have, fortunately, been able to observe on many occasions the manner in which bears hunt seals. In 1905, when off the Greenland ice-pack, I fired from the bridge at a female bear roving along the edge of a floe, and wounded without killing it. It disappeared into the labyrinth formed by the hummocks. Fearing lest I should lose my prey, I set off in pursuit in a canoe accompanied by Récamier and Mérite. We landed, and while exploring the hummocks we fell into a drift of fine snow into which we sank up to our knees. The bear lay in the centre of this drift, still living, although mortally wounded and unable to move. Several photographs of the poor beast were taken. One moment it would crouch low, then rise, stagger a few steps, then sit down to watch us, while all the time it gnashed its teeth and growled from pain and rage. The bear inspired pity rather than fear, and seemed to desire only to be left to itself to tend its wounds. It only appeared menacing when we approached too close.

Mérite settled himself comfortably to make a sketch of it. I remained near him with my gun loaded, because bears, even when mortally wounded, have been known to display marvellous strength and activity. When Mérite had completed his sketch, I finished the animal with

a pistol-shot in the back of its head, and, whilst an oceanographical survey was being made, accompanied Récamier on a little voyage of exploration. The first thing we discovered were the remains of a seal the bear had killed, skinned, and completely eaten, but for the viscera and bones. Following the bear's tracks we came to the spot where the seal had been captured. It was a round hole, about twenty inches across, and was connected with the open sea by a very narrow channel. As we could see from the traces in the snow, the bear had crawled along on its stomach and crouched at the edge of the hole. It must have seized the seal by the head as soon as it rose to the surface and flung it violently on to the snow. The seal had manifestly resisted to the utmost of its power, for the imprints of its fins were very deep, and the snow was stained with blood, in the centre of which lay its head. Judging from the circular sweeps of its tail, it had probably fought as does a carp when seized by the gills. The bear had then dragged its prey away. On one side of the bear's trail we found the marks of the seal's fins; on the other was the blood which had dripped from its neck. Finally, to kill its victim completely, the bear had dashed it against a block of hard, rough ice. It had

afterwards carried it in its mouth to the place where it devoured it. The tracks enabled us to reconstruct the whole drama as though it had been acted before our very eyes !

In July 1909 I saw a bear on an isolated berg eating a seal which had been captured in a different way. We were navigating a wide lake, having to the larboard an ice-pack, and round about us small, floating ice splinters. For three days of fog and wind we had been struggling against the ice pressure, and were holding south in search of an easier passage-way. All at once, Joe, who was on the bridge beside me, pointed to a small floe four hundred yards ahead, and exclaimed : ' Look, there is surely a bear over there ! ' At first I thought he was joking, because bears rarely occupy small floes, but after examining with the binoculars a yellow patch discernible with the naked eye on the floe, I found that he was correct. To my amazement, I also observed a seal rolling itself in the snow on another floe quite close at hand. Meanwhile, the bear was busily occupied on the carcass of a seal, the blood of which stained the snow.

I immediately gave orders for the *Belgica* to approach at speed. It was impossible the bear could escape us, seeing that it occupied

an isolated berg in the middle of a large lake, far from the ice-pack.

The animal at first took no notice of us. Having finished its meal, it commenced to scratch at the snow with its paws in the same way as does a dog when hiding food. Then it squatted on its haunches and watched us.

Commander de Gerlache handled the ship so skilfully that we came to within forty yards of the berg without frightening the bear. Photographs were taken, the animal now standing on its hind paws to examine us. It presented its side towards me, and I fired and struck just beneath the shoulder. A bellow of pain burst from it ; it rolled in the snow, biting savagely at its wound, from which the blood streamed. Finally it toppled backwards into the sea. It proved to be a fine female specimen, which had recently fed so gluttonously on seals that its stomach was enormously distended. While Commander de Gerlache took a sounding of over three thousand feet, I inspected the ice, seeking to discover how the bear had been able to surprise a seal under such conditions. A certain spot on the edge of the floe, which rose fairly high above the water, was very much stained and bespattered with blood. Obviously a terrible struggle had taken place there. Near

this spot was a hole in the ice from which led the blood-stained trail left by the bear when dragging its prey towards the centre of the floe. Studying these traces, it seemed to me that the bear could have captured the seal in one of two ways only. It might have clambered on to the ice from the other side and surprised the seal asleep near its hole. Provided things had befallen in this way, both the animals struggling violently must have fallen into the sea, where the bear killed its prey and dragged it back on to the ice. On the other hand, the bear might have swum unobserved along the edge of the floe until it came to the seal hole, where it surprised and killed its victim, in which case it had dragged the dead seal on to the ice to eat at its ease. I think, considering the habits of these two declared enemies, that the latter version is the more probable, but, of course, I cannot affirm this with any degree of certainty.

The soundings having been taken and my investigation brought to a conclusion, I gave instructions that the neighbouring floes should be searched, in case the female should have been accompanied either by a male or cubs. The search produced nothing, however. We saw only seals and seagulls waiting for us to depart



PURSUIT OVER THE GREENLAND ICE BANK—WOUNDED FEMALE BEAR.

in order that they might resume their interrupted meal on the remains of the bear.

Sometime afterwards I saw, far away to the south, a blot in the sea which awakened my curiosity. This blot appeared to be coming towards us, and from time to time increased in size as though it rose out of the water. Round about it, and moving with it, were several black specks which I recognised as the heads of seals. To my great joy, the binoculars revealed the head of a bear swimming directly towards us, pausing now and then to lift its head and look about. Great, indeed, was my astonishment when I saw that the seals formed a kind of escort around the bear, diving and splashing as though mocking their enemy, knowing that in the sea they were immune from danger. On becoming conscious of our approach, the bear came to a halt, then turned and swam from us. We overtook it rapidly. When it came to floating ice it clambered on to it and trotted swiftly across it in order to gain the advance, but the bergs were too small and too rare in this large lake to permit of its escaping us. Very soon we were close to it. As though divining escape to be impossible, the bear ceased swimming, stretched itself full length in the water and watched us. As Mélite

desired to photograph it from close at hand, we entered a boat and quickly followed the animal, which had suddenly recommenced swimming. Mérite, who particularly wished to obtain a photograph of the animal's face, shouted aloud hoping to induce it to look backwards, but the terrified animal thought of nothing but escaping. I shot it behind the ear. We found that it was a young male bear.

We returned to the ship, where the whole crew had assembled to see the beast hoisted aboard. Having heard the yells and shouts of Mérite, they had attributed them to the bear, and thought that it must be a most ferocious specimen of its species. Mérite was proud of his artistic success !

It was half-past two in the morning, and I retired to bed well satisfied with the result of the day's sport. I had shot two bears and seven seals.

Mérite, creature of enthusiasm that he is, defied the cold, set himself down as comfortably as possible before the two suspended bears, and sketched away right through the night.

The next day we felt the open sea swell beneath us, and after several hours spent in

navigating small bergs, we left the ice-pack behind. I observed that the two bears I had killed must have swum a considerable distance to have attained ice, floating seventy or eighty miles away from the coast.

BEAR CUBS

IN the course of my voyages I have frequently encountered female bears accompanied by their young. In general there is only one cub, but occasionally there are two.

The female is always alone with its young ; I have never seen a male, a female, and the cubs together.

To capture alive cubs of eighteen months or so, even after having killed the mother, demands elaborate preparations, because, young as they are, they are nevertheless strong and very dangerous. Hunters for the most part capture them by driving them into the sea, lassoing them, hoisting them aboard by means of a winch, and lowering them half strangled into a cage. Personally, I have always refrained from risking the lives of the men by taking, in this way, well-grown cubs. I have, however, captured small ones, sometimes on the ice, sometimes in the sea.



FEMALE BEAR AND CUB SWIMMING.



DEAD FEMALE BEAR AND CUB.

After the death of its mother, the cub will sometimes try to escape; occasionally it will remain by the body as though to defend it.

The first cub I captured was off the ice-field of Greenland in July 1905.

We were at dinner when the look-out man voiced the well-known and welcome cry of 'Björn!' (bear).

Commander de Gerlache and myself hastened on to the bridge and were surprised to see, not five hundred yards away, a white female bear, followed by a cub, coming peacefully towards us over the great Polar ice-field. Landing several men, I disposed them in order that we might welcome these strangers with due ceremony. They came quite close to us, the mother leading, the cub following.

Lieutenant Bergendhal, who had on former occasions captured several cubs, informed us that it would be necessary to drive it into the sea, because, if the mother bear were killed on the ice, the cub would seek safety in flight, while, if it were shot in the water, the cub would remain swimming around the body, when it could be easily captured.

Whilst I was attentively examining the two bears, Jonas unexpectedly became excited, just as he had been on the occasion of our first

encounter with a bear. He took me by the arm and howled at me at the top of his lungs, in Norwegian, a torrent of words of which I could understand nothing except that it was imperative to drive the bears into the water.

I asked no more than that; the issue, however, remained with the bears and not with me.

To my intense annoyance, Jonas continued shouting and gesticulating, although only sixty yards away the mother was already displaying uneasiness. If old Father Jonas had understood Spanish, I would have said: 'Vaya usted con Dios' (Go with God!). During the momentary lull I contrived to say 'Bra!' which in English means 'Very well!' My tone was sufficient; he understood and subsided.

The bear halted and examined the ship. The cub drew up alongside and stood on its hind paws, imitating its mother's movements. It was indeed a curious sight to see it turning its head from side to side just as its mother did, wondering, perhaps, what that large white mass was which it had never seen before. While this was occurring, the men sprang quickly on to the ice from the canoe. The bear's inquietude increased. Suddenly it turned as

though to seek safety towards the centre of the ice-field. In turning, it exposed its side to me ; I fired, my shot piercing it through and through between the shoulders. It leapt into the air, twisting convulsively, then set off, quickly followed by the cub, only to fall dead twenty yards farther on. The bullet had severed the aorta.

The cub halted for a moment to examine with great curiosity the mother that would move no more, then it turned and fled inland. Bergendhal, Récamier, and several of the men instantly set off in pursuit, intending to get ahead of it and bar the way. The ice, however, was very bad. The men sank up to their knees in snow or water, while the cub ran without difficulty. Luckily, Bergendhal had instantly noted the topography of the field, and, well used to snow as he was, progressed swiftly. He bore to the left, seeking to drive the cub to the right on to an ice promontory advancing into free water. The men, running as fast as they could, stationed themselves among the hummocks with the object of forming a semicircle. At full speed the *Belgica* rounded the cape, and so came face to face with Bergendhal. More men were disembarked, and the semicircle completed. The bear was

surrounded, although the beaters were very wide apart.

Bergendhal fired and splintered the ice before the cub. It turned back on its trail instantly. Bergendhal followed, firing from time to time, driving it always towards the promontory. The men closed in; the canoe skirted the edge of the ice, hidden from view by the height of the field. Finding each avenue of escape closed to it, the young bear commenced to howl and cry. The boat followed the left flank of the beaters. Nearer and nearer the men approached, crossing lakes of icy water and scaling hummocks, on whose tops the accumulated snow was soft and deep. Thus they gained the promontory, driving the bear before them. A final shot, combined with the shouts of the beaters, drove the cub to take to the sea. It jumped bravely from a point near the end of the promontory. The beaters on the left flank embarked in the boat, seized the oars, and placed themselves between the ice and the cub, thus cutting off all retreat. Its capture was now certain. I experienced great relief, as I had commenced to ask myself whether I had not been too precipitate in shooting the mother bear, and thereby assisting the cub's escape.

Jonas manipulated the lasso. The first attempt failed, the young bear having placed its paws on the edge of the boat. But a second attempt succeeded, and the running knot tightened about its neck. The 'hurrahs' of both spectators and actors responded to the bellows of rage which escaped the prisoner.

The man in the boat pulled for the ship, the cub vigorously swimming at the end of the rope held by Jonas. Repeatedly it attempted to clamber into the boat, and only with the greatest difficulty was it kept at a distance.

A second slip was passed over the hind legs and tightened. Bound and helpless the cub was hauled aboard. It did not, however, remain quiet for long. Directly it touched the deck it commenced to lash out in all directions with its paws, trying to kill or smash everything within reach. In vain we sought to soothe it. The Commander, at the risk of being torn to pieces or badly wounded, seized the head rope and held it, whilst the second rope was fastened to a belaying pin. Dangerous, and even imprudent, as was this manœuvre, it succeeded admirably. A box was brought, the open end of which was pushed towards the cub, compelling it to retreat to the door of the cabin. Then a panel was slid between the door and

the box, and the cub was a prisoner. It made a most infernal noise, bellowing and tearing madly at the walls of its prison, but they proved too strong for it. We left it for a time to reflect on its fate while we went to obtain the skin of the mother bear.

Like the two bears I had already shot that day, this one possessed a magnificent head, and haunches rather larger than those of male bears generally. Probably because it was still suckling its cub, it was remarkably thin—a mere bag of bones. I recollected that far away to the north we had seen only male bears, while here, close to the continent of Greenland, we had met only with females. Can it be that female bears in general seek the land when suckling their young? That is a question which still awaits an answer. I can only affirm that up to this point I had always encountered male and female bears wide apart.

Everyone having re-embarked, the course was resumed, and we sat to finish our interrupted dinner. The beaters had well earned it. They were soaked to the skin, having passed through pools of icy water shoulder deep. Further, Récamier, Ottersen and Julius had had a very narrow escape, it transpired. They had been standing on the edge of the

floe when the ice suddenly gave way beneath their feet. Happily, they had managed to spring on to firm ice and so save themselves from being badly crushed.

I congratulated Bergendhal on his address and agility. None of us doubted but that for him we should never have captured the cub.

Meanwhile the carpenter had constructed a cage. At four o'clock in the morning it was ready. The problem of transferring our passenger to its new quarters was now discussed.

Récamier affirmed that the cub was quite quiet, and that it would be easy to lead it from one prison to another with the rope. Disregarding my advice, he loosened one of the planks of the box. To our great amusement a boxing match ensued between the cub, which pushed its head and one of its paws through the opening, and Récamier, who, armed with a torch, sought to intimidate it. The struggle was accompanied by the ear-splitting cries of the bear, and the equally violent exclamations of the doctor. It having been proved conclusively that our prisoner was still unreasonable, the plank was refastened and the box placed on top of the cage. The ropes were then unfastened, the panel withdrawn and the animal fell into the cage. Throughout the operation

the cub howled with rage, seeking to destroy everything within range. Once in the cage, however, it became quiet and we were able to sever the ropes fastening its legs. It had already torn the rope from about its neck itself. We gave it some cooked meat and some milk in a bowl. The animal drank thirstily, and then, after having cried, howled, growled and trembled, it stretched itself out with its fore paws on the bowl, which it would not permit us to withdraw. Its air now was one of philosophical resignation. Considering the great trouble we had had to capture this cub, one can easily imagine how terrible a hand-to-hand encounter with a full-grown bear must inevitably be.

The cub was one of the same height as our dog Rouss. It possessed enormous paws and knew well how to use them. Its strength and agility were surprising in so young an animal, so much so indeed that several men could not have held it down without running the risk of serious injury. As it is, all's well that ends well. Jonas had received a blow on the hand from its paw; one of Bergendhal's fingers was slightly torn, and this was all.

At six o'clock in the morning I was again called. The weather had cleared; though black

clouds still covered the sky. Far away in the distance Jonas had sighted a bear on a large floe. We set our course for it, but could not see it, because of the great number of jagged ice-blocks scattered over the surface of the floe. Some time later, however, it appeared in the open, making for the canal towards which we were sailing. We burnt herrings and grease to attract it, and to our delight quickly discovered that it was a mother accompanied by her cub. They approached us slowly but confidently, adopting precisely the same tactics as the others.

Halting, snuffling, rising on their hind legs, they approached until at last less than twenty yards separated us. The men were already in the boat fully armed to capture the cub after the death of the mother.

Perceiving that it was futile to endeavour to entice them still nearer, and that they would not voluntarily take to the water, I fired full in the chest of the mother as she stood facing and watching me. She turned and ran swiftly, bleeding freely. A second shot in the heart felled her in her tracks at a distance of twenty yards. The young one had, of course, followed its mother. On seeing her fall, it halted, rose on its hind paws, and commenced to growl. Taking infinite care not to frighten it, three

men landed on one side, while Bergendhal and the other men pushed alongside in a canoe and completed a semicircle. The cub permitted the men to approach quite close to it, then, instead of jumping into the sea, it dived into the canal which split the floe, and which was too wide for the men to cross. In flinging itself into the water it acted just as a human diver does; the two front paws were joined above the head, the rest of the body stretched to its full extent. Only, instead of cleaving the water, it struck full length. Scrambling on to the ice on the other side, it commenced to trot along the edge. The boat was recalled to convey the beaters across the canal and hold itself in readiness, whilst Bergendhal went to head off the cub accompanied by the doctor and a squad of men. Thus, little by little, a semicircle of men closed behind the fugitive, which was in turn confronted by Récamier and Ollivier. Brought to bay at last, it halted. Blazing away with their firearms, the men slowly forced the cub towards the sea and the spot where the boat lay, at the bottom of which several men were hiding. A last charge of the beaters compelled it to dive.

Bergendhal, re-entering the canoe, overtook, lassoed, and towed the cub to the *Belgica*.



FEMALE BEAR FOLLOWED BY CUB.



CAPTURE OF THE CUB.

To get it aboard the same procedure was adopted as before: a slip-knot around the neck, and a second one around the hind legs. The cage in which the first cub, Martin, was confined was partitioned into two. After some trouble, during which Bergendhal was rather badly torn, we succeeded in securing our prisoner. The noise the two cubs made in concert was ear-splitting. Milk calmed them. The beaters returned aboard soaked with perspiration and the water through which they had splashed.

Of these two bear cubs, one, Martin, lived with me at Norton. It grew to a great size, but always remained savage and dangerous. The other, called Joe to commemorate the part the doctor had played in its capture, I gave to the Paris Museum, where I recently learnt it is to be seen still in good condition.

The bear cub I captured on August 12, 1909, on the Franz Joseph ice-pack, behaved differently from the others. Instead of running, it turned upon the hunters when they approached the body of the mother.

We saw, away to the starboard, a bear, followed by its cub, quietly ambling along over the surface of a small floe surrounded by free water. The two animals appeared to be neither afraid nor troubled by our presence, and

trotted towards us. Duly we arrived at the edge of the ice-field. I left my post on the forecastle and took up a position before the charthouse, where no one could disturb me and I would be able to observe every movement of our visitors. As they neared the ship, the mother displayed some uneasiness and hesitation. After having snuffled the wind blowing from our direction, she curvetted like a circus-horse. She intended, it appeared, to depart in the opposite direction, and as at that moment her side was towards me, I fired. The bullet entered her head, and she fell dead without even a groan. It was curious then to observe the cub. It seemed surprised to the point of stupidity, unable to comprehend what had passed. It flung itself upon its mother, hugged her, walked round her, and finally found the wound from which the blood had escaped and set itself to lick it. Then again it commenced to wander around the body, crouched upon it, rose and stood on its hind legs, then sat down again like some overgrown Newfoundland dog. It manifested not the slightest intention of quitting the body. This was quite contrary to all my experience of cubs. Reflection leads me to believe that this was due to the different manner in which the mother had been killed. In the

first instance, the mother, mortally wounded, had staggered on a few steps before it fell convulsed. This had served to terrify the cub, who instantly took to flight, turning nevertheless from time to time to see if the mother was following. On the present occasion, however, the mother, falling without a groan, had not alarmed the cub. The young one, mystified by this sudden silence of its mother, and unable to comprehend the reason, remained near her as much from fear and want of protection as from filial love.

The cub appeared to me so big and strong that I deemed it would be folly to attempt to capture it. Seeing, however, that it displayed no intention to run away, Swensen, Rachlew, and Mérite were landed on the ice with lassoes and a squad of men. When the cub saw the boat approaching, it rose erect and anxiously inspected it. At first we thought it would turn and run, but after circling the motionless body of its mother, it again resumed its position over it, and made no further attempt to move. Meanwhile, the men had disembarked and formed a semicircle between the bear and the centre of the ice-field, so as to drive it into the sea, where other men waited in the boat ready to lasso it. But the poor little

orphan declined to desert the body over which it stood guard. The men advanced towards it, shouting ; still the cub refused to move, hiding always behind its mother, bellowing furiously, and making as though to charge the men. Mérite and Rachlew made exposures three yards from it, while Joe and I also photographed it from the bridge of the ship.

As soon as it became evident that the cub would not take to the water, one of the men contrived with the aid of his alpenstock to slip a running knot about its neck. The men then dragged it a few yards, despite its frantic struggles. The knot broke, however, and the cub ran back to take up its former defensive position over its mother's body. Another lasso was prepared. The men, holding it open with their alpenstocks, passed it over the cub's head and again secured it. The end of the lasso was made fast to the boat, and in this way the little bear, fighting madly, was hauled over the snow into the sea, and compelled to swim to the *Belgica*. According to all precedents, it should have been left swimming until the mother's body had been hoisted aboard, or at least until a cage had been prepared for it. Not doubting for a moment that this would be done, I entered my cabin to obtain

some photographic apparatus. My astonishment when on returning to the deck I found that the cub had already been hoisted aboard can easily be imagined. The fury of the little animal was terrible to behold. Commander de Gerlache repeated his 1905 experiment. He seized the rope near the cub's neck, just as one would take a dog by its collar. The cub flung itself upon him, and with two blows tore the Commander's coat and trousers almost to tatters. De Gerlache retreated quickly, whereupon the maddened cub flung itself at one of the men. Each moment it threatened to break loose. Standing on its hind legs it gnawed the rope about its neck, then rushed forward, mounted the ladder, and tried to throw itself into the sea. We managed just in time to fasten the rope to the mast and prevent this. Finally we had to fling a cloth over its head to blind it. When it grew quieter, Récamier, the Commander, and Rachlew got astride of it, and held it down whilst its hind paws were bound. It was amusing to see the three men mounted on this strange steed, which struggled and bucked and bellowed without a moment's pause. The cub was victor; the three men were sent sprawling to the deck. The animal then succeeded in tearing the cloth from its

head. The first thing its eyes fell upon was our tame seal, watching the scene without emotion. Instantly the cub rushed at it. Fortunately for the seal the rope was short. The struggle recommenced.

Again the cloth blinded the cub and again the men mounted it. This time Ollivier succeeded in fastening the animal's hind legs, and it was quickly reduced to impotence.

In the meantime, Swensen had had the mother's body hoisted aboard. As soon as the cub saw the body it rushed to it and commenced to suckle gluttonously, all the time watching us with terrified eyes, but making no further attempt to move, sucking successively the four teats.

Mérite was successful in obtaining several photographs of it while the men were hauling on deck Martin's old cage, which I always carry aboard. The cub continued to suckle furiously, paying no attention to what was going on around it. The presence of its mother reassured it; the sight was both poignant and moving.

At last the cage, well washed, stood ready, and to Mérite's despair the final struggle commenced. Two men mounted the vedette, raised the cub and lowered it into the cage. It

fought like a devil incarnate, and bit Hermann's hand severely. Only with the greatest difficulty were Joe and Swensen able to force its hind paws into the cage. Finally, rendered helpless by half a dozen of the men, it was firmly secured. Its bonds were removed and the cage covered. As soon as it found itself in darkness it became quiet.

Hermann's hand having been attended to, we sat down to dine, and drank a glass of champagne in honour of our new prisoner. For long the capture of that young bear was our favourite theme.

REINDEER

WHEN in 1904 I visited Spitzbergen for the first time in my yacht *Maroussia*, herds of reindeer were still to be found on the mountain sides of the ice fjords, and on landing at the mouth of the Sassendahl Valley I shot a dozen in three or four hours. This fresh meat was most welcome to the crew. Had I so wished, I am sure I could have shot forty ; for it is the simplest thing in the world to approach reindeer in these regions. Even when frightened they often run directly towards the hunter.

Nowadays, few are to be encountered. The tourists landed here each summer by the German steamships have almost completely destroyed them, the more easily because the reindeer always remain near the fjords. In the same way the coal miners of Advent Bay will soon have denuded the higher valleys of reindeer, as in the Giers Valley, where the animals are

extremely rare, although at the time of my visit in 1904 they were still numerous. As a result, I am convinced that the reindeer is destined to disappear speedily and completely, at least so far as western Spitzbergen is concerned. On the other hand, as the reindeer seem to thrive admirably in this region, where they seem to escape the parasitical illnesses and epidemics which decimate them in Siberia and Nova Zembla, I think the day is not far distant when Laps will establish themselves on the banks of the ice fjords to breed and raise the domestic reindeer, as is already done in Lapland and the north of Norway. That I am not wholly without reason in making this assertion is evident. Formerly, vast herds of wild reindeer wintered without difficulty on the high plateaux which abound in these regions, where the wind, sweeping away the snow, enables them to find moss and lichens, so that, similar conditions prevailing, to breed the domestic reindeer, which is done with such marked success in Alaska, should be a simple matter in Spitzbergen.

As I have already said, I shot a dozen reindeer in 1904 in the Sassendahl, by simply walking a few hundred yards over the alluvial plains which lie at the feet of Mounts Marmier

and Lusitania. To approach the animals was easy. Similar success attended an expedition which we made a few days later to the Giers Valley, which lies south of the ice fjord. Certainly, this latter hunting-ground was not easy of access. We had to wade a river's swampy delta and cross a torrent whose water rose to our shoulders. Récamier, indeed, slipped and vanished completely beneath the surface for a moment. Having once attained the valley, however, I had no difficulty in killing the five or six reindeer whose horns and flesh were desirable. Many herds were to be seen on the mountain side, and when I fired, several reindeer came near, curiously seeking to learn the cause of the noise. The hardest part of the expedition was the return, when we were heavy laden with the fresh meat, which we carried in the animals' skins after a fashion I had seen practised in Africa. To avoid the swift-running torrent which we had been compelled to cross in setting out, we descended the valley, and stumbled into a bog. It was one of those filthy marshes so numerous in the Arctic and Scotland. At each step we sank to the knees or deeper; the men lost their boots, several of us fell, and altogether we presented a ludicrous sight after that long struggle through the mud. Récamier told me

afterwards that the young sailor who was assisting him to carry the reindeer suddenly sat down and commenced to weep from very weariness and anger. The doctor, used as he was to fatigue, assured me that he felt like doing the same thing himself. The sensation which seizes one is one of absolute and complete impotence. Time and courage overcome all obstacles, however, and finally we got all our reindeer safely aboard. My sincere advice to the casual hunter is to avoid Giers Valley. He may perhaps succeed in shooting a reindeer or two, but he will never bring back his game, and probably never return himself. The danger of dying from fatigue up there on the heights is not to be despised.

Swensen, the Norwegian captain who accompanied me in 1909, was one of the cleverest hunters and strongest men I have ever met. Yet he told me that on one occasion he stumbled into a similar bog when carrying a reindeer he had shot. For six hours he struggled to withdraw his game from the mud; but the swamp conquered, and he had at last been compelled to abandon the carcass and save himself. He added that when he came to firm land again he would most probably have lain down and slept, had it not been that one of his companions,

disturbed at his protracted absence, came up to him at that moment.

Swensen and I together had a more agreeable experience in Lowe Sound. On the occasion to which I refer the weather was splendid, the land admirable, and the reindeer still sufficiently wild to lend interest to the sport. Everything in fact was just what a hunter might desire. After a short sojourn at Bell Sound, where we watched the whale-hunting, and duly admired the two magnificent glaciers at Recherche Bay, we entered Lowe Sound on July 24, and found it a kind of fjord branching away to the north of Bell Sound. Navigation is rather difficult here due to the presence of strong sea currents, which swirl through the narrow passage-way and attain enormous power between the coast and the little islands which form a sort of dam at the entrance to the fjord. Fortunately, Swensen, having hunted a great deal in these regions, knew the currents perfectly and proved himself an excellent pilot.

A towering, rugged cliff formed the right bank. Moss-covered as it was, the green presented a curious contrast against the blackness of the rocks. This cliff is one of the largest rookeries in the Spitzbergen seas. Thousands and thousands of guillemots, sea-swallows, and sea-



A REINDEER AT LOWE SOUND.

parrots cover the surface at every stage. When a shot is fired and echoes among the rocks, the day grows dark as the terrified birds rise and form a cloud which obscures the sun. I think, however, I have never seen so many birds as those congregating on the cliffs of Bear Island. On a certain occasion we were approaching this island in a boat, when guillemots passed directly above in a cloud, covering us with a moisture similar to that which blinded old Tobit!

Lowe Sound extends far to the east, almost cutting Spitzbergen in two, as does the ice fjord farther north. The surrounding mountains are not very elevated, and their shape and regularity call to mind the pyramids of Egypt. Towards Micaël Rinders Bay, on the south side and near the western extremity of the Sound, the peaks become higher, forming an immense circle. Each of the valleys in this circle contains a glacier, which meet and present an extended and imposing front to the bay.

Unfortunately, the beautiful effect of this imposing mass of ice is somewhat marred by the secondary moraines the glaciers have formed. These moraines, composed of mud and the débris of rocks, extend across what would otherwise be an enormous dazzlingly white surface.

Leaving Micaël Rinders Bay to the right, we passed into a very narrow canal formed by two old moraines leading to Bragança Bay at the further end of Lowe Sound. We found it impossible to enter this shallow, internal bay, and were compelled to drop anchor in four fathoms of water.

The valleys around Bragança Bay all contain glaciers. One of them presents a magnificent spectacle, falling like a cascade frozen, its edges being fringed with ice that, from a distance, appears diaphanous.

Bragança Bay is the ancient bed of an immense glacier. Little by little the neighbouring glaciers which formerly fed it have exhausted it, and the principal glacier has disappeared, leaving a large lake behind its moraine. The accumulated waters from thawing ice and snow have forced a way through this barrier, forming the winding channel in which we were anchored. Year by year the secondary glaciers shrink towards the snow-covered summits of the inland hills. The effect is at once sad and striking when viewed from the end of the fjord; the glaciers have become little more than mud-stained heaps.

I desired during our sojourn to replenish our store of fresh food before proceeding to

Franz Joseph Land, so that when Swensen, from the crow's-nest, discerned two reindeer feeding on the northern shore of the Sound, I embarked without loss of time in the canoe, accompanied by the Captain, Rachlew, and two men. We followed the bed of a stream, and half an hour later the two reindeer appeared on the horizon. They crossed the stream to an extensive plain of frozen clay lying between the foot of the mountain and the sea. I posted the two men behind a boulder, and, together with Rachlew and the Captain, pushed onwards over the deep caverns which thawing and moving glaciers had torn in the clay soil. Soon we were close enough to see that one of the reindeer was a male and the other a female. Unfortunately, both were in velvet at that time of the year. Among horn-shedding animals, I think the female reindeer only has smaller and slighter horns than the male.

Rachlew and the Captain remained to guard the river course, while I made a detour to get between the animals and the sea. This rendered escape impossible for them. The terrain made stalking easy, and the animals were not wild. I selected the male for my first shot, thinking that if it fell the female would delay

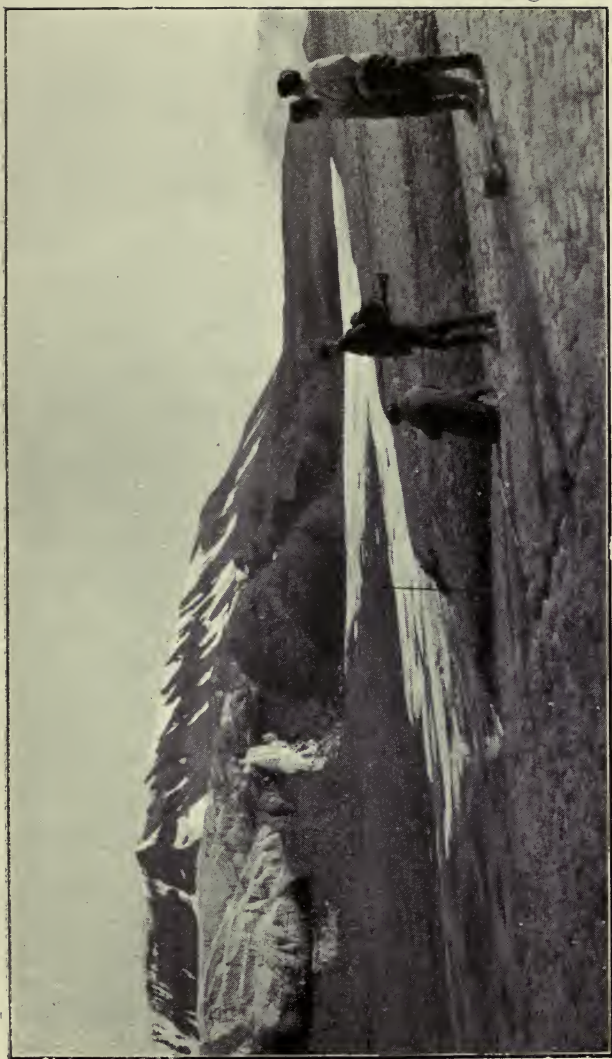
its flight and so give me time for a second shot. As I anticipated, the female instantly took to flight when I had shot the male, but, in turning to look for its fallen mate, it gave me the anticipated opportunity, and with two shots I brought it down. Both the deer were large and well fleshed, and served the purpose of supplying us with a fair quantity of fresh meat. Hardly were the animals dead, and before the sailors had rejoined us, when the gulls and stercoraires which had been circling above us settled on the carcasses. Five minutes before not a bird had been in sight. Where they came from is a mystery ! The animals were cleaned, their fore feet tied together, and each sailor carried one on his back to the boat. I thought of returning with the men, but the Captain was confident we would discover other reindeer in the little valley winding in and out of the moraine, which extends to the foot of the mountains on the northern side of Lowe Sound. We therefore set out to explore further. This plain deserves description. It is composed of a series of frozen hillocks, separated by small lakes and twisting ravines. Everywhere there is a thick bed of shells of all kinds, among which I particularly noticed St. Jacques' Shell, or the Great Comb. Manifestly, the plain must have

been submerged after its formation, and has since been left dry by the withdrawal of the sea—a very common phenomenon in Spitzbergen. We found several eider on the little lagoon, but no reindeer. There were numerous traces of them, but they were very old, and we also discovered the tracks of hunters. It is possible that these men had come from the coal or gold mines at Bell Sound. Apparently they had destroyed everything on the coastline, where the reindeer are so easy to shoot, and my chances of encountering game were very remote unless I was prepared to go much farther inland. I therefore turned back. In passing the spot where I had filled my bag I noticed that an enormous number of gulls had now gathered, and were fighting for the entrails. The plumage of this gull, the real vulture of the north, is of the purest white. I shot a few of them, and we were on board again by half-past eleven.

The weather had become fine ; little by little the wind had fallen. We succumbed to the temptation to go and photograph the glacier suspended between the two mountains towards the south-east. Entering Bragança Bay in the boat, we passed into a narrow channel, and followed the moraine as far as possible in a

southerly direction. The water became shallower, and at last we were compelled to land on a beach of frozen clay, smooth and even as the Marisma near Seville. It is astonishing how lands so wide apart and so differently constituted resemble each other. The clay was the same, cracked where it had become dry, each depression holding water and forming little lagoons. Swimming in one of these lakes we observed a brace of Arctic ducks, which, seeing us, took to wing and flew towards the sea. We surmised that we would find the nest of these birds in the lagoon where we had surprised them, and decided to make a search on our return. On a cliff top I also saw one of those ducks, resembling a mandarin in appearance, which are known as the 'Beggars of the Arctic.' I chanced a shot, but failed to bring it down.

Everywhere we encountered the whitened bones of belugas, dating, it appeared, from those days when the Russians came chasing these cetaceans. It is well known that these white whales seek the seclusion of the bays, and are netted. Lowe Sound is in every way convenient for such fishing. A bed of dry clay displayed fresh traces of reindeer, and, unluckily, of human beings also. Ice, indeed, cannot protect



GLACIER ON THE SOUTHERN SHORE OF BRAGANZA BAY (VIEW OF THE GREAT MORaine).

by water. All ducks build their nests in the same way ; that is, almost in the water. This is because their webbed feet are little adapted for walking. Swensen examined the nest and found it empty. He was of the opinion that the ducklings had been devoured by the foxes, which are very numerous, and of which we discovered many recent traces.

Having come to the conclusion that little sport was to be had in this region, we returned aboard, raised anchor at nine o'clock, and re-anchored before a deep valley in which, on the preceding day, when we were navigating Lowe Sound, Swensen had seen two reindeer.

The weather was magnificent ; there was not a cloud in the sky, and the wind had fallen. The evening was grand beyond description. Before us sparkled the glacier between the triangular pyramids of the mountains, which rose, all snow whitened, into a sky of the deepest blue. The sea shone like a mirror ; gulls and stercoraires fluttered about the old blackened and torn moraines forming the shores of the Sound. The picture was perfect !

We anchored at eleven o'clock on the northern coast, near the mouth of the river along whose banks Berners geese swarm. But now the landscape was hidden by high peaks, and it

began to grow cold, so I returned without attempting this game.

The next day the weather continued fine, with the sun very warm. We might have been in the Italian Alps instead of in Spitzbergen, so near the Pole. At eight o'clock, Rachlew, Swensen, and myself embarked in the canoe with three men, carrying our rifles and provisions for the whole day. Before leaving, the Captain pointed out to us a reindeer half-way up the mountain. Its pasturage was, however, on the farther side of the river running through the valley which was our destination. We decided to follow the right bank of the river, and to leave this reindeer until our return, after having crossed the torrent nearer its source. We did this because the Captain was convinced that the two reindeer he had seen two days before could not be far away; these animals rarely move great distances. We steered our course for a small hill formed of broken rocks, at the foot of the higher mountains. The ground we first crossed was rather swampy, but was not a morass, and progress was rendered easy by reason of the mosses and other plants. There is but little similarity between the valleys of Bell Sound and those of Ice Fjord. In the latter, one frequently sinks to the knees in thick

mud composed of saturated clay, while here shale rendered the ground fairly hard.

We scaled a rock to examine through our binoculars the valley extending before us, and very quickly we detected a reindeer lying in the snow less than a thousand yards away. Its back was turned towards me, but as it occupied a small platform, the approach presented difficulties. It would not have been difficult to approach from the bottom of the valley, but we were easily seen from our elevated position. I hid myself behind a rock to wait until the animal changed its position, and rendered approach less difficult. It was truly most obliging! After waiting a few minutes, I saw it slowly rise and vanish into a small ravine near the platform. Leaving Rachlew and the men behind, and accompanied by Swensen, I ran as fast as possible for a second boulder, behind which we would be unobserved. I softly stole forward to the place where the reindeer had disappeared. To my great delight, I saw the tips of its horns appear above the sides of the ravine, and, exploring still further, I discovered that instead of one, there were two reindeer lying on the slope of the ravine. I approached within fifty yards of them without attracting their attention, and achieved the double coup. One

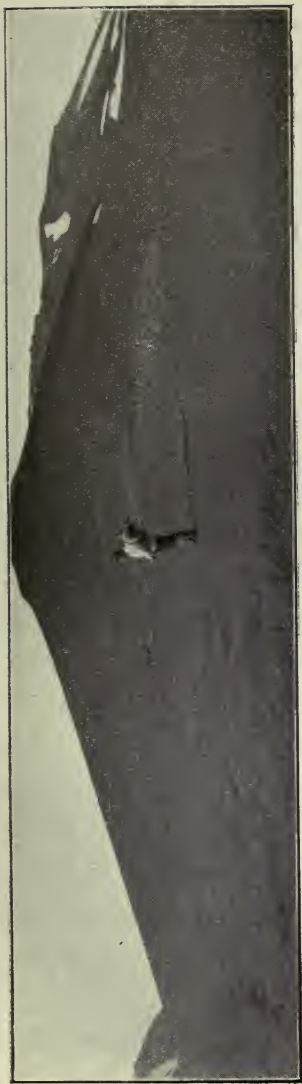
was a male of two or three years, the other a female. The day had indeed commenced well !

The men cleaned the animals well, washing the interior with snow, and using some shed antlers, of which there was quite a quantity in the valley, to keep the sides apart.

As we were already far from the ship, and it was necessary to send two sailors back with the carcasses, I decided to lunch first in a well-sheltered and sunny spot on the bank of a stream of excellent water. I quickly heated the conserves and two bowls of excellent beef. As we had, besides, warm coffee and rum in our bottles, we lunched splendidly. After a pipe, I sent the two men back to the ship with the reindeer, and pushed my way up the valley.

We discovered plenty of fresh tracks in a narrow gulley, but after having covered several miles we arrived in sight of the suspended glacier without having encountered any living thing. Other hunters must have been before us, for we found recent traces of shot deer. We agreed that it was useless to go farther. We re-entered the principal valley after crossing a deep and rapid stream and clambering over boulders. Almost at once we found on the slopes new traces of two deer, a female and a fawn.

Following the tracks, we soon came upon the animals feeding high up the mountain side. How to approach them was the question. The ground was quite open, presenting no cover. After consideration, I left Rachlew and the sailor hidden in the ravine, while Swensen and myself redescended and followed the course of the torrent until we gained the level of the two reindeer. I halted there and sent Swensen higher up the mountain side to turn back the animals in case they took to flight. These arrangements rendered escape impossible. When I judged that the Captain had arrived at his post, I commenced to wade a small muddy stream which flowed from the plateau on which the animals were feeding. I could only advance when the deer turned their backs to me, and had to crouch low when they came grazing in my direction. Despite all my precautions, the mother very soon became uneasy. (Female deer, when in young, are always more easily alarmed than an isolated one or a male or female together.) It is probable that the wind carried them a danger signal; at any rate they began to run away to the right of me. They did not go far. They saw the Captain and came back at their topmost speed. I had hoped that they would descend into the valley, and so enable



SAILOR CARRYING A REINDEER.



NORTHERN SHORE OF LOWE SOUND.

me to get a shot at a fair range. They breasted the mountain side, however, leaping the shale heaps. I was therefore compelled to risk a long shot, otherwise they would have escaped, as the direction they took was not guarded. I sighted for three hundred yards, and saw that my bullet raised a small cloud of dust short of them. This served but to hasten their flight. Sighting higher and farther ahead of them because of their speed and the distance, I tried a second shot, and had the good fortune to bring down the mother, who rolled down the slope, whilst the fawn continued its flight. It fell to my fourth bullet, my other three shots having only grazed it. It is indeed difficult to bring down an animal of the size of a fawn, when running, at a distance of more than five hundred yards. I cleaned the animals myself while waiting the appearance of my companions, who were tardy. The noise of the torrent had prevented the Captain from hearing my shots. His astonishment at finding me sitting beside the two already cleaned deer was almost ludicrous.

As only one man now remained with us, old Hermann, we sent him back to the ship with the female deer, and instructed him to send another man after us. We divided the ammunition, knapsacks and cameras, and then, leaving

the fawn behind us, we remounted the valley towards the interior. After a time we reached a point from which we could inspect the whole land as far as the spot where the river left the snow-covered summits of the inland ice. The northern slopes were well covered with herbage, but there were no signs of pasturing reindeer. We therefore returned to the spot where we had left the fawn, and had a snack while waiting for the sailors now climbing towards us. On their arrival, I redistributed the packages and sent one man back with the fawn. Accompanied by the other two sailors, we again pushed onwards to a high plateau on which Swensen had that morning seen a reindeer. It was necessary to cross the river, which was extremely wide and rapid, to reach the spot. Fortunately, we discovered a snow bridge and soon were scaling very steep slopes on which were many blackened reindeer skulls. Swensen surmised that these were the remains of a hunting expedition. He assured me that in former times he had shot from one hundred and fifty to two hundred reindeer on each of his expeditions to Lowe Sound. This reveals how rapidly deer have died out, even in this relatively unfrequented region of western Spitzbergen. We arrived at length at the foot of a cliff which towered

almost five hundred feet above the Great Moraine. The view was magnificent. Before us extended the fjord, closed on the west by the dark shore of Axel Island, which bars the entrance to Lowe Sound, and which must have been the earliest moraine of the huge glacier, whose bed, once upon a time, was this same fjord now filled with water. Surrounded by its circle of mountains was the 'glacier of Micaël Rinders Bay, and at our feet, like a map in relief, lay the far-extending range enclosing Bragança Bay, displaying small, still lakes amid rounded clay mounds and ice-covered flints. The channel in which we had anchored the preceding day connected Bragança Bay with Lowe Sound. A rare and stunted plant grew on the high plateau on which we stood, and after a time we discovered a reindeer feeding between the rocks. We could only approach it by passing around behind the crest of the cliff. It was a dangerous and tiresome journey over treacherous shale which slipped beneath our feet. Each step had to be considered. To ascertain the exact position of the animal Swensen raised his head above the cliff crest, and found himself nose to muzzle with a big reindeer which had come up to us with a trot. We had not seen it, but it had scented us, and in

turn had trotted up to investigate. I had barely time to sight my rifle before it was away again, fleet as the wind; I brought it down in full course.

Another which appeared in the distance had apparently not heard my shot. I left Hans in charge of the dead deer and stalked the other on hands and knees. The glasses told me it was a young fawn. It was both wild and timid, and fled whilst I was still a good distance from it. I was obliged to fire at four hundred yards, and broke its shoulder. It was no longer able to run, but it continued to limp forward. This permitted me to overtake it and photograph it before making an end of it.

Swensen was much elated at the day's sport, and still eager for further stalking; but we saw nothing more than stercoraires and gulls, which circled about us, waiting for us to disembowel the deer and give them a meal ready prepared. We now had a sufficient supply of fresh meat. As it was becoming late, I decided to return at once to the *Belgica*, lying far below our feet in a lake of polished silver. So pure is the air in these regions that I was able with the binoculars to recognise in the crow's-nest Joe, who had followed the fortunes of the hunt through a telescope. Wrapped up as he was

in his furs, he appeared more like a fledgling in its nest than anything else. We descended to the river through a superb evening. We were compelled to follow the torrent for some distance, because it was too deep for wading and too swift for swimming. We decided not to cross until we came to the delta. Even there the water reached half way up the thigh, and we were compelled to battle with a strong current ; but all being used to this kind of exercise we regained the other shore in safety, where a boat awaited us. It was 8.30 P.M. when we returned aboard. We had been absent twelve and a half hours, out of which we had only rested for three-quarters of an hour to lunch, make observations, and clean the deer. We dined with tremendous appetites. Wearied as I was, I retired early after a day which would have satisfied Saint Hubert himself in those days before he renounced stag-hunting.

THE WALRUS

THE best of all trophies a hunter can bring back with him from an Arctic expedition is a walrus head. The possession of a fine bear skin may, indeed, be more desirable, but from the sportsman point of view the walrus is the true sporting animal of the North.

Lamont, who cruised the western seas of Spitzbergen from 1860 to 1865, when walruses were still very numerous, has given us glowing descriptions of the sport.

Unlike the seal, the walrus does not inhabit the ice-fields. It rarely leaves the coasts, and is to be found in shallow water from which it can easily gain the land to search [for the molluscs which represent its natural food. It sleeps or rests either on the sand or on a floating ice splinter, and it is during this siesta that its enemies elect to attack it.

Formerly, walrus-hunting was conducted in two different ways. When a number of the

animals were found sleeping together on a beach, by no means an infrequent occurrence towards the end of the summer, men were cautiously landed, and, taking a position between the walruses and the sea, they lanced the animals nearest the water. Those farther inland then sought to escape, but were impeded by the bodies of those already killed, and, being unable to reach the sea, proved very easy prey. Thousands and thousands of walruses have been destroyed in this way. The method savours rather of crude slaughter, unworthy of the true sportsman, than of real sport.

Hunting, in the true sense of the word, is obtained when walruses are encountered on the ice or swimming. The animal formerly was first harpooned, then finished with a lance. As a matter of fact, harpoons are still used; but more often than not nowadays the weapon is fired from a gun, and the harpooned animal afterwards finished with a rifle shot.

It is almost an impossibility to kill a walrus with a single shot; a walrus shot in the water, without first having been harpooned, is lost because it sinks instantly. Hence it becomes necessary, when a walrus is found on ice or in the water, to harpoon it before firing. Fortunately for the hunter the animal sleeps heavily, often

on small splinters of ice which serve to submerge the hindquarters whilst elevating the head. To approach it then is not a difficult matter. On the other hand, it is quite impossible to approach in the same way the larger species of seals, for they are always on the *qui vive*.

Generally, Norwegian whaling boats are used for hunting the walrus—it is imperative that only the strongest of boats be used. The harpooner sits in the bows, having before him four small casks, in each of which is a harpoon attached to a carefully coiled line. The wooden handle of the harpoon is flexible, and the steel point is only attached to it at the last moment. As soon as the harpoon has been flung, the boat backs away to the full length of the line. The lines are rarely more than one hundred yards long, because walruses habitually seek shallow water, and never dive to more than a depth of a hundred and fifty feet. At that depth the pressure is too great to permit of the animal capsizing the boat.

Besides harpoons, walrus hunters carry lances. The steel points of these lances are light and very sharp, while the handle is made of pine, shaped conically. These harpoons are almost as thick as a carriage shaft. The reason for this disproportion between the handle

and the steel is that, should the harpoon fall short of the quarry and into the sea, it will float.

The practice of firing harpoons at the walrus instead of flinging them by hand is in these days widely adopted. A dangerously near approach is rendered unnecessary, and the possibilities of alarming the animal are reduced to a minimum. Again, instead of killing the animal with a lance, there are many who prefer to shoot it as it swims, dragging the boat after it.

A single shot suffices to kill the walrus provided it finds the one vulnerable spot, that is, just where the head joins the body. It is, on the other hand, almost impossible to shoot these animals when they present their face or sides, their maxillaries being so thick as to be almost impenetrable.

In the middle of the last century walruses were still very numerous towards the east of Spitzbergen. One reads in 'Lamont' the account of a slaughter which took place in 1850 at Thousand Islands. As far as one can gather, it was no more than a disgusting butchery, because it occurred towards the end of the season, when the ice was fast closing. The hunters were not even able to take with them the teeth of the eight hundred animals they

killed in a few hours. Most of the walruses were left to rot where they had been killed, and the inevitable stench which arose must have tended to keep away other walruses. Nilsen, an old hunter from Hammerfest, who accompanied me on my first expedition to Spitzbergen, told me that he passed the season following this massacre on the island, and had killed in one afternoon twenty-eight bears, which had come to feed on the bodies of the walruses.

Nowadays the walrus is only found to the north of Greenland or in the neighbourhood of Franz Joseph Land. At least, in those two places only have I met with them, although throughout all my voyages a keen watch was kept. During our cruise in the Kara Sea we did not see one, notwithstanding the fact that there must be some in this region, just as there are all along the Siberian coasts.

To find the walrus it is necessary to enter the ice-fields and risk being ice-bound throughout the winter. But the capture of old males, like those I found north of Greenland, affords sufficiently exciting and impressive sport to compensate one for fatigues endured and dangers run. Apropos this, the stories told me by walrus hunters are not at all grossly exaggerated, as many people are inclined to

believe. The fury with which two walrus attacked our boat off Koldewey Island, when they were not even harpooned, and the rage with which the female, one of whose young we had harpooned in Hamilton Canal, came at us, first revealed to me the real dangers of this sport. A furious walrus will upset a boat with the greatest of ease, provided the men are not armed with guns and quick to use them, for with a single blow of its tusks it will smash the bottom and sink the boat. Numerous indeed are the walrus hunters who have perished in this way.

Jackson and Koldewey write of two occasions when hunters, standing on ice several inches thick, suddenly saw a walrus smash the ice beneath their feet in order to get at them, and when they ran for safety, follow them by swimming beneath the ice-field, from time to time smashing the ice with a blow of its head at places where it hoped to find the men. Jackson even affirms that he once saw a walrus fling itself from the water on to the ice to charge some hunters. I have never heard, however, of another instance of a walrus landing to fight. On the contrary, hunters generally agree that a walrus on the beach or on ice is almost completely disarmed. Nor have I even

heard of an occasion when a walrus attacked a man in the water ; but of their readiness to attack a boat, and the fury with which they seek to sink it, I have been witness.

My first encounter with a walrus was off the coast of Greenland in the month of August 1905, when ice pressure compelled Commander de Gerlache to shelter the *Belgica* behind Cape Arends, on the southern extremity of Kolde-
wey Island. Whilst awaiting more favourable weather, I took advantage of the delay to land and explore a plateau which the Germans had missed, and which we were the first to describe. After having explored the long terrace formed of pebbles, shingle, fragments of quartz and mica, and strewn blocks of granite, we turned to re-embark. At that moment we saw in the water near the beach two large walruses, who were diving and reappearing from time to time to breathe. Large red-beaked gulls circled in the air above the little bay, in which we occasionally caught a glimpse of the great bodies or black muzzles of the two animals. Jumping into our boat, we returned aboard with all speed, because we were carrying no harpoons, and the men affirmed that the walruses were two old males, who would most surely attack us. In the bows of the largest boat I placed all

the necessary paraphernalia, took a rifle, and, accompanied by Récamier and four men, set off instantly. Quartermaster Andreassen was in charge of the harpoon, Ottersen was at the helm, while Hans and Julius were at the oars. I went forward, Récamier remaining aft to shoot the animals if they came to the surface astern. Arranged in this fashion, we quickly arrived at the spot where we had sighted the walruses, and very soon I had the pleasure of seeing the head of one of them appear above the surface. It dived again almost instantly, and we rowed for the place where it had disappeared. It again reappeared, but this time quite out of range. We altered our course, and a few minutes later a walrus appeared and commenced swimming towards us. I sighted the harpoon gun and fired. I missed! The harpoon tore open the back of the animal, no more. The walrus dived swiftly, sending the water to a great height. In despair I turned to Récamier, believing that all chances of a capture were spoiled. Hardly had I turned my back before there sounded a great splashing a few yards ahead, and both walruses came into view. They raised themselves high in the water. Both were facing us, breathing heavily. Their ivory tusks and white moustaches contrasted curiously with

their black muzzles. Perceiving our boat, they swam straight for us. All this, of course, only occupied a few seconds, during which I had seized my rifle, while one of the sailors sought to bring the harpoon aboard. It had sunk and become fastened to the sea bottom, thus forming a grapnel which prevented us moving. I aimed for the neck of the larger walrus, and fired. A flood of blood dyed the water; the two animals dived with a great splash. Shortly afterwards they reappeared quite close to the boat; but now the wounded one supported itself on the shoulder of its companion. The two animals were furious. Ottersen, standing in the stern, contrived always to keep the boat's bows towards them. Now commenced the real battle between the walruses and ourselves. At four yards I opened fire, aiming at their heads. They dived, reappeared farther off, and again came for us. The blood-stained water was flung high as they furiously beat their way through it. Yet once more they disappeared, this time to reappear astern. I shouted to Récamier to shoot; we both fired at the same moment. Récamier's bullet found the neck of one; mine penetrated, *viâ* the nostrils, the brain of the other. Agonised convulsions seized them both. My cartridges being exhausted,



SHIPPING A BEAR-CUB.



BEAR-CUB ON ITS MOTHER'S BODY.

I seized the doctor's rifle, reopened fire, and completed the business. Everything grew calm again; the sea became tranquil and smooth as a mirror. We waited anxiously to see the walruses reappear, but they had sunk. My intense disappointment may easily be imagined. The thought that those two superb animals were at the bottom of the sea, and that I might never encounter another walrus, was maddening.

A few bubbles of air came to the surface and burst. Two strokes of the oars and we were over the spot. Peering into the water we discovered that we were able to see the bottom of the sea, and, what was more, a grey mass and two white tusks. It was one of the walruses lying in about eighteen feet of water. Quickly I took the land bearings, because a strong current was causing us to drift, and, regaining the spot, I constructed a grapnel of the harpoon. Ottersen then fastened two harpoons together, weighted them with a piece of iron, and flung them at the body with all his strength. The harpoon struck, the line held, and, hauling little by little, we finally brought the walrus to the surface, where it floated astern of the boat. Having hauled the animal to the shallow water near the shore, we fastened a rope about its head and fins, and then, the six of us landing, hauled on this

cable and sought to get the carcass on to the ice. Failure rewarded our efforts ; six of us as we were, we could do no more than drag the head and neck on to the ice. We fastened the end of the rope to a broken oar and jammed it into a crevasse. I then signalled the ship, and shortly afterwards another boat came towards us in which were de Gerlache, Koefoed, Mérite, and three French sailors. Reinforced as we were by the new arrivals, it was still as much as we could do to haul the animal on to the ice. It was an enormous and splendid specimen. Its huge rounded body was covered with cicatrices caused by the ice or gained in battles. Its neck was disproportionately large ; its head so small that it seemed to be attached directly to the body. The black muzzle was covered with white bristles as stiff as those of a porcupine. Its long, strong tusks measured twenty-six inches in length, and were two inches in diameter. The eyes were so small as to be almost imperceptible. The mouth was closed, and the nostrils, now closed also, were in shape exactly like a *fleur-de-lis*. Lying stretched to its full length, and flaccid as it was, the animal appeared hideous, bearing little resemblance to the superb beast which had, a short time since, come thrashing majestically through the water towards



THE WALRUS OF GREENLAND.



MY TWO OLD MALES OF 1905 (KOLDEWEY ISLAND).

our boat, with nostrils dilated, flinging high into the air a cloud of blood-tinged spray. At that moment it had indeed been king of its element. With its white tusks, its black muzzle, and almost its whole body out of water, it had seemed like a charging hippopotamus ; stretched now on the ice, it was no more than a mass of flabby flesh of no precise shape.

It measured about thirteen feet six inches long, and rather more than ten feet around the thickest part of the body. I was proud of our achievement !

Meanwhile, the sailors had discovered the body of the second walrus lying on the sea bottom. We harpooned it, and with the aid of tackle brought from the ship we hauled it on to the ice more easily than we had the first one. This also was a large male, whose tusks, shorter than those of the other, were, however, stronger. Brief as was the interval it had been in the water since death, it was already covered with minute shell-fish. From its nostrils blood still streamed, for this was the one I had shot full face. As regards the first, the bullet had entered its mouth, smashed its palate at the moment when it was charging, and penetrated the brain. The sailors skinned the walruses and I returned aboard with my trophies, quite

forgetful of our precarious situation, and thinking only of our success. By extreme good fortune neither of my bullets had touched the tusks, which were quite intact. I have never since fired full face at a walrus unless circumstances compelled me to.

Lamont tells us that the most vulnerable part of a walrus is the third fold of the neck. A bullet entering there smashes the base of the skull. The anterior part, which seems to belong to the head, is in reality flesh which is covered by hard skin.

Even with the most up-to-date rifle, it is almost impossible to kill a walrus with a single shot when face to face. The shock of a bullet striking the large maxillary bones is sufficient to arrest it, but to kill, the bullet must enter the mouth, penetrate the palate, and so reach the brain.

During our cruise in the Kara Sea we did not sight a single walrus or, as far as that goes, any living thing. But during my voyage of 1909 I more than once encountered walruses on the Greenland ice-field, as well as in the Hamilton Canal and at Franz Joseph Land. On two occasions, at least, the sport was exciting

We had left the Gripper Roads on July 22,

and were coasting Pendulum Island through a large ice-free canal. The beauty of the coast had kept us on deck until midnight, and I was just retiring when Commander de Gerlache warned me that a walrus was in sight. The *Belgica* stopped, and I mounted the bridge in less time than it takes to write these words. From the bridge I saw to the larboard a small ice splinter, floating in the middle of the blue sea. There was something very strange about this ice splinter—a brown undefinable mass surmounted it; it resembled more than anything else an inflated gas-bag. Beneath the weight of it the ice splinter almost sank. The effect was curious; it led one to think that here was some antediluvian monster. As a matter of fact, it could have been nothing but an enormous walrus.

I had long desired to see a walrus harpooned by hand, so I had a small boat lowered and embarked with my Mannlicher repeating rifle. Captain Swensen took the oars. He was to play the part of harpooner. In low voices we discussed circumstances and arranged our plan of attack. We decided to try and approach our quarry from behind without awaking it. To do this we were compelled to break our way through young ice which had already formed

around the ice splinter, and which cracked and scrunched as we advanced. Provided we could approach the animal sufficiently closely, Swensen was to fling the harpoon, and as soon as the animal raised its head I was to fire, aiming for the third skin fold of the neck. If, on the other hand, the walrus took alarm, a by no means improbable contingency, considering all circumstances, I was to fire as soon as an opportunity afforded. Finally, if it escaped into the sea, Swensen was to attempt to harpoon it as soon as it came to the surface.

I must point out that a harpoon is not a weapon for dealing death. Its object is to attach the animal until it has been killed, and then to support the carcass, which otherwise would sink immediately. It is, therefore, imperative that a walrus should be harpooned before being killed. My experience four years earlier at Cape Arends (I have already related the incident), when we had the greatest difficulty in recovering the bodies of two walruses I shot without having first harpooned them, established this. Had the water on that occasion been deeper, the walruses would have been lost. More experienced now, I desired to avoid similar accidents.

As we neared the ice splinter we were able

to distinguish more clearly the mass of flesh and fat extended upon it. The animal was indeed very large, and was so flaccid in one part that it bulged and sagged into the sea. Looking at it from behind, it appeared more than ever like a half-inflated balloon. Suddenly I perceived a white form above the motionless animal; at first I took it to be a gull perched upon the body in the same way as birds perch upon cattle in the East. Very quickly, however, I discovered that it was a tusk of the walrus, whose head was turned towards the sky.

The bow of our boat smashed through the thin ice, but we approached so cautiously that we did not disturb the slumber of our prey. With the bows of our boat almost touching the hinder parts of the animal, I photographed it and seized my rifle, while the Captain balanced himself and made ready to hurl the harpoon. Two swift strokes of the oars brought us right up to the animal, and Swensen planted the harpoon deep into its back. A terrible roar escaped it at this unexpected attack; it was a cry of fury and astonishment rather than of fear, and suddenly, towering above my head, appeared the white face of the infuriated beast. It possessed only one tusk; its mouth

yawned wide open ; its moustaches bristled. Widely dilated nostrils formed two black gaps in the whiteness of its face. Its eyes, although in reality very small, now appeared very large, distended as they were with rage. It had elevated itself on its two front fins, and consequently dominated our boat. I sighted for the neck and fired. A jet of blood spurted into the air. The shock of the bullet stunned the beast. It flung itself backwards, supporting itself with its left fin, madly beating the air with its right. Very quickly it recovered itself, and struggled to turn about and dash at us. This movement displayed its hindquarters ; Swensen instantly hurled his harpoon, the handle of which struck me in the face. Manifestly we were too close to our quarry. Swensen, fearing that the animal would slip off the ice and wreck our boat, backed water a little. Losing no time, I emptied the contents of my rifle into its head, and again it fell backwards. The heat of the animal's body had so hollowed the little floe that it seemed like a cradle. As it was covered with excrement, it was evident the animal had occupied it for some time.

The walrus was now extended to its full length, and to me seemed to be quite motionless ;



WALRUS HOISTED ON TO THE ICE (GREENLAND ICE BANK).

but the Captain, busy with the harpoon line, affirmed that it still lived. I therefore recharged my rifle and fired. As though to confirm the Captain's words, the walrus writhed a little, and finally slid into the sea on the farther side of the splinter. After that it moved no more, but remained floating in the middle of a lake of blood.

In order to facilitate the skinning, we towed it to a second floe slightly larger than the one it had occupied. To hoist it on to the ice, however, necessitated the use of some of the ship's tackle, for which I accordingly despatched the boat.

Eight men, with running gear, found it no easy matter to draw that enormous mass of flesh on to the ice. A rope was made fast to its head, a second to its anterior fins. One of the ropes was anchored to the ice and the other was passed through a pulley. In this way, and after much exertion, the carcass was landed. The animal proved to be much larger than those I had shot four years earlier, but, unfortunately, it possessed only one tusk. The other had probably been lost long years before in the course of one of those terrible fights which old male walruses wage among themselves. An enormous cicatrice in its

back must have been obtained in the same way.

Having photographed it, I had it skinned, not after the Norwegian fashion, but in my own way, as I desired to have it stuffed. The Norwegian fashion is to cut the skin in two and strip the hind and forequarters separately. This renders the operation both easy and expeditious, but it also renders the preservation of the skin in its natural form quite impossible. The skinning recalled to my mind the cutting up of some huge African pachyderm, for it was as large as a hippopotamus, which, indeed, a swimming walrus resembles to a great degree. I left the men working happily amid the blood and grease, and returned aboard to resume my interrupted sleep.

On August 17 in that same year a wish I had long nursed to visit a walrus island was satisfied. Franz Joseph Land had afforded me a splendid day's sport, interesting from every standpoint, and had rewarded us for the dangers and the difficulties we had overcome in penetrating the ice-field which guards that inhospitable shore. Our arrival was not a happy one. A dense fog enveloped us, which had not lifted a moment for fifteen days. Thick, dangerous-looking ice had threatened to

strand us off Cape Maurice and, haunted as I was by the recollections of Tegethof's cruise, I had on more than one occasion almost ordered a retreat. Fortunately, we had discovered a large open bay in the ice-field, which had permitted us to push northwards, and we had come to Franz Joseph Land, meeting from time to time large stranded icebergs, which, indicating shoals as they do, proved excellent guides. We steamed cautiously, sounding our way, conscious of the nearness of the land, but still unable to see it. Occasionally, in spots where the mist thinned, we were able to obtain a vague glimpse of the coast. Our gloom deepened at sight of the land!—what abject desolation to have achieved after enduring so much! Steeps of snow and ice, rising from the sea and becoming lost to sight in the mist which their vibrations kept in motion, were all that lay before us. Cliffs, formed of basalt columns, here and there stained the whiteness of the snow. The land was one of mysterious and depressing stillness. Depressing indeed was my first impression of Franz Joseph Land!

Notwithstanding his long experience of navigating solely by instinct and calculation, de Gerlache, who had been unable to take a

single observation for fifteen days, was unable to say at what point in the south-eastern archipelago we were. A line of cliffs away to the right, however, appeared to belong to MacKlintok Island, whilst directly before us a large glacier, forming the eastern side of the fjord, argued the proximity of Leigh Smith Island. As we approached, I observed a phenomenon which I have frequently noted at Spitzbergen. As far over the sea as eye could reach, a thick mist hung low, whereas in the fjords it was high, cutting in two the mountains and permitting us to see only their bases and summits. As we entered the fjord we were able to see quite clearly to the larboard an immense glacier descending directly from the snowy canopy which covers Leigh Smith Island, as well as the other islands in this archipelago. This glacier sloped right into the sea, presenting an ice face almost one hundred feet high, which became more and more vague as it vanished into the mist to the south-west. Right in front of us a cliff of black basalt, rising almost a thousand feet, broke the glacier. As we passed this cliff we observed streaks of red and yellow snow—a common phenomenon in these regions, caused, so it is affirmed, by microscopical weeds which the excrement of the birds

nurses to life. We could plainly hear the calls of the mergules nesting on the summit of the cliff.

Unexpectedly the mist rose, and there before us lay Young Sound, closed by an enormous ridge of bay ice extending from Royal Society Island to Nansen Island, and forming one side of the canal we were navigating. As the sun gradually appeared, kissing to life the world about us, and sprinkling the ice and snow with diamonds, the landscape assumed a grand and majestic character, which, although savage, was not without charm. My first impression had been one of awful desolation; now I was impressed by the imposing aspect of this dead land covered completely with a white shroud, and I was compensated for having persevered. I believe that only in this archipelago does one encounter islands covered completely with snow descending right into the sea, leaving only a few spots where basalt may be seen with a slip of beach formed of rounded pebbles.

Finding Young Sound barred by bay ice, behind which Jefferson Island was quite inaccessible, and feeling a stiff breeze arising which promised a wild night, we agreed, the commander and myself, that it would be unwise to anchor in

so unprotected a spot. The course was altered, therefore, and we entered Hamilton Channel, a narrow fjord between the north of Nansen Island and the south of Pritchett Island, and finally anchored to the west of Pritchett Island in a sheltered bay between a glacier and a strip of pebbly beach. We dropped anchor in fifteen fathoms of water at half-past ten at night near two large stranded icebergs, which seemed like buoys in our little harbour.

The following morning I landed on Pritchett Island. It is, in fact, the only place where land is to be encountered hereabouts. Plants and herbs flourish on the white terrace forming the south-western extremity of the island. On our arrival the preceding night I had seen two *stercoraires* circling around their nest. Further, the Captain had pointed out to me several large duck in a small lagoon some distance off. I rose early, therefore, and landed on a shore composed partly of sand, partly of ice, in the vicinity of one of the stranded icebergs. I observed a rather curious phenomenon here. From the beach, land ice extended, but it was beneath the water, exactly as though it had been fastened to the sea bottom, instead of floating on the surface as usual. This is due



FOOT OF A GLACIER, PRITCHETT ISLAND (HAMILTON CHANNEL).

to the fact that the sea is frozen right to the bottom during the winter, its superficies only melting during the spring.

The cape near which we landed was formed of large blocks of well-worn basalt, and was of no great height. Round about, thawing snow had rendered the earth swampy. In places, mosses and anemones and, to my great astonishment, long green grasses flourished in the clayey soil. I was about to examine this curious vegetation when Swensen recalled me to the boat. He informed me that he had just seen a female walrus and her young swimming parallel with the coast close to the beach. We rowed to the spot where the animals had dived, and waited. Shortly afterwards they reappeared. They were swimming too rapidly, however, for us to overtake and harpoon them. I waited whilst Joe photographed them, and then, taking advantage of a moment when the head and neck of the mother were well above the water, I fired and killed it. She swam onwards for a few moments, then slowly sank. Although the men at the oars did their utmost, we came up too late to harpoon it. The water, we found, was far too deep to permit of the body being raised. My annoyance was extreme; I hate losing wounded or killed game, and prefer rather to

go without sport. The incident, however, but confirmed my former opinion that it is madness to shoot a walrus before it is harpooned. The walrus calf continued to swim about us, but it did not come within range. Had I shot it, we would undoubtedly have lost it also, so we returned to the beach and I again disembarked.

First I visited the lagoon Swensen had pointed out to me, and there we found three large Arctic ducks, a father, a mother, and their youngster still in down. The lagoon was separated from the sea by a narrow ridge of large pebbles. On this I took up my position and sent my companions to drive the birds towards me. I shot the three, not without trouble and the expenditure of many cartridges, for these northern ducks die very hard indeed. The fact that the duckling was not yet able to fly had kept the parent birds near it, otherwise I doubt whether I should have obtained them at all. The old ones were very beautiful, with long red necks and slate-coloured plumes. As regards the duckling, they are very rarely to be obtained, and this one occasioned *Mérite* great joy. To him there is no living thing as interesting as a young chicken in down. One may well ask oneself how these ducklings, in down in the

month of August, are able to accompany their parents south towards the end of September. Truly, the early development of these birds is remarkable !

Leaving the lagoon, we followed the sea-shore until we came to large basalt boulders. From the bridge I had noticed a plank near a certain rock, and this had aroused my curiosity. We came duly to the spot and found against a basalt block three wooden casks, one of which had been opened. The names on these casks informed that they contained provisions left by the Ziegler expedition. The casks had been cached, but a bear, either famished or curious, had discovered them and torn one of them open. The beast's labour was in vain, for the provisions were contained in metal envelopes. Our attention was attracted by a large stone surmounted by two smaller ones, near which was a quantity of flotsam. Here we discovered seven more casks buried in the same way in the snow, and a bottle marked 'Kadia' lying in a hollow in the ice. We examined it, and found it to contain coffee tablets and an envelope. In vain we tried to extract the envelope, and I was finally obliged to smash the bottle. The envelope, green, but very well preserved, was addressed 'To the Finder.' It contained a document

signed by Baldwin, leader of the American Ziegler expedition. The following is a copy of it :

‘BALDWIN ZIEGLER, POLAR EXPEDITION.

‘Steam Yacht *America*,

‘New York, U.S.A.

‘SS. *Fritjoff*. SS. *Belgica*.

‘On board.

‘October 10th, 1901.

‘After having made an unsuccessful attempt to return to Norway for reinforcement, we are now returning to camp Ziegler (West and East, there being two camps which I have so distinguished on the South East and South West coast of Alger Island). Alger Island is just to the Nord West of M.Clintock Island and of Brady Island. Matilda Island is South of West camp Zeigler about half a mile. Both Alger and Matilda Island lie across the Northern end of Aberdare Channel. The depot of Emergency rations and Kato Coffee Tablets is for our use.

‘Signed : EVELYN D. BALDWIN,

‘Commanding expedition.’

I brought this document, so interesting from the geographical point of view, away with me. I cannot refrain from commenting on the naïveté of that last sentence : ‘The depot of Emergency rations and Kato Coffee Tablets is for our use.’

We certainly had no intention of touching them, but I think that an explorer or hunter,

finding himself at the end of his resources, would have ignored Captain Baldwin's statement rather than die of hunger. More particularly so had he known that the Ziegler expedition had returned to home waters six years before!

We continued to follow the coast and came upon the remains of an encampment. There were tent-pegs, empty preserve bottles, sticks, a leather shoe and a pair of felt snow-shoes, which the bears and foxes that had visited the spot, as was evident, had neglected. Next we explored a little prairie lying at the foot of the high basalt cliffs. We encountered everywhere running streams and vegetation very prolific considering the latitude. There were large anemones and various grasses and mosses.

I saw a snow-rustler leave a hollow in a rock where doubtless it had its nest. High up in the basalt cliffs nested thousands of mergules, whose cries were deafening and who flew in clouds.

The mist, which had thinned, now permitted us to see Allen Young Sound lying at our feet, as still as a lake and affording us a splendid spectacle. The channel, as far as we could see, was studded with stranded or floating icebergs

of enormous size, displaying every conceivable colour variation. Only once before in the Greenland ice-fields have I seen so many bergs detached from a glacier assembled in one place. A few grey walruses swimming up the Sound, seen thus from on high, seemed like hippopotami floating on the surface of the water. The atmosphere, however, reminded us that we were in Franz Joseph Land and not in Africa.

Among the birds flying above or swimming in the Sound were guillemots, *uria grylles*, mergules, and both sea and land gulls. I also observed two specimens of the dwarf macareux, which is very rare, and which I have only seen at Spitzbergen. They were, unfortunately, quite out of range.

We collected specimens of red and violet quartz, agate, serpentine, etc., and afterwards returned to the boat. On the beach was Mérite, sheltering himself from the wind beneath a large umbrella, and painting, with his usual conscientiousness, a skua he had killed in its nest. We returned aboard, where I read the letter I had discovered, and gave my companions an account of the morning's occurrences.

A number of Greenland seals swam about the ship, but I did not disturb them, and we sat

down to lunch, during the course of which Captain Swensen saw from the crow's-nest two walruses climbing on to the ice at the end of Hamilton Channel.

We had intended to leave this channel and make for Markham Sound, where walruses, so it was reported, congregated in great numbers. However, we decided to follow the animals we could see, although there were only two of them, a certainty being better than a mere probability. The entrance, too, of Markham Sound might well be ice-bound. So we raised anchor and sailed between two glaciers towards the end of the channel, which was barred by bay ice and encumbered with small floating bergs. Some distance from the floe occupied by one of the walruses we stopped the *Belgica*; the whaling boat was lowered, and a harpoon gun placed in her bows. The Captain and myself sat in the bows, Rachlew and a sailor took the oars, and Récamier, whose calmness and sang-froid I well knew, brought his camera and sat in the stern next to the helmsman. As we neared the ice-floe we saw that instead of one walrus there were two—a mother and its young one, already well grown. Swensen decided to try to harpoon the calf, because he deemed it impossible to approach near enough to use

a hand harpoon. Provided he succeeded in harpooning the youngster, the mother would most certainly not desert it, and we would have the opportunity of treating her in the same way. Then, all that would remain would be for me to shoot the animals.

We arranged all this in lowered voices while we approached the floe on which the mother and her calf were peacefully sleeping, side by side, with their backs towards us. We were about thirty feet from the animals when they awoke, and, raising themselves on their fore fins, inspected us curiously. Joe and myself seized this opportunity to photograph them. As they turned towards the edge of the floe, the calf leading, Swensen fired the gun. The animals disappeared in a cloud of smoke and spray, but I saw the harpoon line run out swiftly, then stop with a jerk, and we found the boat was being towed along rapidly. The men hauled on the line, and the two animals came to the surface just ahead of us.

The young one, which we had harpooned, swam with all its strength ; the mother did her best to help it to escape. Suddenly, however, she appeared to realise that escape was out of the question. Thereupon she dived, reappeared quite close to the boat, and charged at us.



WALRUS ABOUT TO ATTACK (HAMILTON CHANNEL).

Récamier succeeded in obtaining a snapshot which, I believe, is unique. When she came within range, Swensen plunged a harpoon into her side. The handle of the harpoon flew through the air as she dived down again. A second later we felt her dashing her head or tusks against the bottom of the boat, endeavouring to sink us. She came to the surface to breathe right beside the boat. Standing up, I fired, killing her instantly with a bullet in the neck.

The calf still tried to escape, but two or three bullets quickly finished it ; and now we had the bodies of the two animals floating astern at the end of the lines. We signalled the *Belgica* to come to our assistance, because we found it impossible to tow these enormous masses of flesh and fat any distance.

While we waited, we examined the surrounding ice through the binoculars. On a floe near a glacier on the eastern side of the canal I perceived a very large walrus asleep. Swensen recharged his gun with a new harpoon. We spoke the *Belgica* and passed the lines aboard. Joe, who had exhausted his supply of films, gave place to Mérite, and we set off for the glacier. Our new quarry was extremely large, and we surmised that it was an old male. It lay

stretched to its full length, its hind fins doubled beneath its body, its head supported by its long tusks, the ends of which were buried in the snow. We were within thirty yards of it before we perceived there was too much ice to permit of a closer approach. This compelled us to back-water and pass directly in front of the animal at a distance of twenty yards. My camera being injured, I found time to repair the damage while we were skirting a band of ice to enable us to bear down on our prey from the right. The wind and currents had accumulated a quantity of ice splinters between us and the floe. Swensen gave the order to enter this drift. We contrived to make our way through it by thrusting it aside or using it to haul ourselves forward. To me it seemed inexplicable that the walrus should not take alarm at the noise we made, and attempt to escape ; a seal would most certainly have dived long before ; but the animal, watching us through its small eyes, only raised its head for a moment, and then lowered it again until the tusks once more supported it. We approached slowly, smashing through the ice, hauling ourselves from floe to floe, and making a terrible noise. Our boat seemed to be crashing its way through a glass house, yet even when we were twenty

yards away the walrus did not budge. Finally, we attained an ice block which partially hid the beast from us. It was then only ten yards from the gun. It was, however, impossible to fire because of the position of our boat. We were parallel with it instead of having our bows directed towards it. Swensen gave the word to back-water, and manœuvred the boat until it was in position. During this operation we created a great fracas directly beneath the walrus's nose; it watched us calmly. Only when we were in position did it raise itself slowly on its fore fins. The movement exposed its chest, surmounted by an enormous black muzzle and two white tusks. It opened its mouth either to yawn or roar, and I clearly saw its palate. The gun thundered; its echoes were still ringing along the glacier as I obtained an exposure. The walrus fell backwards, as though stunned by the shock. The floe on which it lay broke in two and the body sank. The harpoon line ran out swiftly before it became taut, and towed us some twenty yards or so through the ice splinters. When the walrus reappeared it was vomiting floods of blood; it supported itself by resting its tusks on the edge of a second floe. After a moment's rest it dived again, but quickly reappeared, convulsively

beating the water, and two shots ended it. Most remarkable was it that the body did not sink. Evidently the animal had been so terribly injured by the harpoon, which had completely opened its chest, that it had been unable to fill its lungs with water at the moment of death, as these animals usually do. The lungs, having remained filled with air, caused the animal to float.

It was a magnificent male. We secured it firmly by the head, and having with some difficulty negotiated the mass of ice splinters which had collected around us, we reached the *Belgica*, which had followed us. Joe had feared that the explosion of the gun might detach some of the large séracs which seemed ready to fall from a glacier near at hand, and as on such occasions the resulting wave is always exceedingly high and powerful, the Commander had diminished the distance between us in case of accident.

We now made preparations to hoist the monster on board, a by no means simple operation. The two preceding animals had already caused the crew considerable trouble. The present carcass was much larger than the others, and new methods had to be adopted. We found it necessary to pass the rope to which it

was attached through one of the foreyard blocks and raise it by a steam winch. Gradually the body emerged from the water, and seeing it then one would have believed it to be a hippopotamus whose teeth had grown outwards. It came over the netting on to the deck, where it lay a shapeless, flaccid mass of flesh, weighing about two tons.

The female that I had shot was, on the other hand, a splendid specimen, its body being covered with silvery fur, its head being finer, if one may use such an expression in connection with such a hideous muzzle. As regards the calf, which Swensen estimated to be about two years old, it weighed three-quarters of a ton, and its little tusks measured from three to four inches in length, curving towards the under lips.

We resumed our course, and as the weather did not appear altogether promising we decided to return to our anchorage of the morning and give the men time to skin our game. I also intended to build a cairn and place in it the Ziegler provisions to preserve them from the bears.

At 6.30 P.M. we again dropped anchor off the beach near the stranded icebergs. We dined quickly, and afterwards I dictated a

letter to Joe which I signed and enclosed in a stoppered decanter. The document ran thus :

Polar Yacht "*Belgica*."

'The Duke of Orleans, accompanied by a hunting expedition aboard his Polar Yacht *Belgica*, landed on Pritchett Island on the 17th August, 1909, and found in a provision dépôt a document placed there by the Ziegler expedition in October 1901. The provisions have been left untouched so that they may be utilised in case of emergency.

'The document referred to has been removed.

' PHILIPPE.

'The prince's companions were :—

'Commander de Gerlache, Dr. Récamier, Gunnery Lieutenant Rachlew, Captain Frangstman Swensen, Edouard Mérite (Artist), Louis Bourjoulet (Servant).'

We landed at the same place as in the morning. Having made fast the boat, we went towards the boulder near which I had found the first casks of provisions. Examination convinced us that we might not hope to find a more favourable spot for our cairn. We gathered together the scattered casks. Several of them were sunk deep in the snow and ice, and were freed only with difficulty. Fortunately, we found some large beams which Louis used as levers, and

these rendered our task easier. The casks were piled against a basalt boulder. We then built a wall of big stones around them. The top of the cairn was covered with flotsam after I had introduced the decanter containing the document into an empty cask which I covered with two flat stones. Two floating pine trees were drawn ashore and erected in the centre of the cairn. Altogether, the cache was conspicuous and quite capable of resisting the attacks of bears. On one of the trunks, which rose high above the cairn, Swensen carved deeply an arrow pointing towards the interior, to indicate the direction in which anyone who found it must search.

Our task finished, we returned, making a detour to visit the lagoon and search for the nest of the ducks, which Mérite was very eager to examine. It was easily found at the water's edge near the spot where I had killed the birds. Like all ducks' nests, it was built on the shore in the form of a truncated cone with a very small entrance hole surmounted by a platform. The nest was composed of layers of brown and green mosses fastened one to the other. In fine, it appeared for all the world like an enormous cake of leaves.

A strong south-easterly wind had sprung up, piling the fog into banks and driving the

ice rapidly up the Sound. This, presaging no good, left me rather anxious.

We returned on board at half-past ten, where Mérite, oblivious to all things mundane when his art called, commenced to paint the female walrus and the young one, the male having already been skinned. I retired to bed well content with my day's sport, but not altogether happy at the weather prospects. The land about us was not one to inspire confidence; in our present position we ran great risks of being ice-bound in the Sound, and Swensen, I knew, was particularly anxious to get away.

My premonitions proved not altogether unfounded. That night and the two days following it were indeed terrible. The wind blew in squalls with terrific force. Everyone aboard feared the worst; the cold was so intense in my cabin that I shivered even in my bed. The fog, blown by the wind against the mountain side, filled the fjord, so that, shrouded as we were by a dense clinging mist, we had also to bear the full force of a tempest.

Swensen was very much afraid that the ice hurried in our direction by the wind would crush us; but as it was quite impossible to retreat in such weather, he slackened the



APPROACHING A WALRUS. FRANZ JOSEPH LAND (HAMILTON CHANNEL).

anchor cable to make sure of our fastenings, and we afterwards sat down to await God's good will.

To remain on the bridge was quite impossible. The keen, searching wind almost cut one in two, while there was great danger from the enormous icicles which fell from the rigging, bombarding us continually. The walruses having been skinned in haste, everyone went below hatches and we sat down to await events.

Fortunately, one day bears but little resemblance to another in the Arctic regions. Changes succeed each other with extraordinary rapidity ; consequently, one's outlook on the surrounding world undergoes modification. After two days of storm and dense fog, which we passed in our cabins, August 20th dawned calm and fairly clear. For the first time in six days we caught a glimpse of the sun. On the evening of the 19th the wind commenced to fall little by little and the fog lifted, and at seven o'clock in the morning of the 20th we were able to move. We set off in haste to examine the ice piled up by the wind, and to discover whether the entrance to Young Sound was barred or not. While we were raising anchor, a group of belugas or white whales surrounded the ship, but the noise we made frightened them away before we had time to lower a boat.

Navigation in Hamilton Channel was easy. We passed the cairn, which appeared well placed and very conspicuous. In Young Sound the fog had turned to rain. We were able to obtain occasional glimpses of the cliffs and glaciers of McKlintock Island, which facilitated our progress. There was a large quantity of floating, wind-smashed ice off Leigh Smith Island, but it was not very thick and did not greatly hinder us. When finally we found ourselves in the open sea, everyone was surprised. Coasting the ice front of Leigh Smith Island, we found that the fog had lifted sufficiently to permit us to admire that land, so imposingly desolate.

Both the ice and the snow appeared that morning more vividly red and yellow than on the former occasion ; from time to time huge séracs fell more than a hundred feet down the face of the glaciers into the sea with a noise like the report of a cannon. Fascinated by the sight, we passed rather too close to a glacier, sailing between it and a stranded iceberg. The sailor in the bows taking soundings suddenly warned us of the peril we ran. We retreated without loss of time. These colossal icebergs, stranded as they often are in almost a hundred feet of water, prove excellent guides as to the sea bottom, and the ship that always keeps them

between itself and the coast is certain of being in a safe channel. Unwise is the navigator who disregards these natural buoys !

At two o'clock we were off Newton Island, and set sail to take advantage of a slight breeze which had sprung up. The weather had cleared, and it was possible to distinguish clearly the dome of Hooker Island. Swensen saw a bear on the ice in Bruyn Straits, and we set our course towards it. The first bear was joined by another. They lay side by side, their backs to the wind, and we surmised that it was a mother and her cub. The Captain began to make preparations to cage the cub in case it was captured, but to me it appeared too fully grown to risk the lives of men by bringing it on board alive.

The two animals were sleeping on a small floe surrounded by broken ice, near an ice free lake. Proceeding with great caution, we succeeded in taking up a position between the bears and the bay ice, and advanced on them without disturbing them. Soon we were within range, and still the bears remained unconscious of their danger. From the bows of the *Belgica* I fired, aiming between the female's shoulders. She rose on her hind legs, swayed a little, then fell stone dead.

I fired again, at the cub, which was already trotting away. It fell into the sea as dead as its mother. The boat set off to bring back the bodies of these bears, which brought the number I had killed during the year up to forty. The mother, we found, was already very old; the cub from eighteen to twenty months.

At eight o'clock Swensen sighted a large blue seal on a floe off the bay ice. Unfortunately, the mist had closed down again, and the animal was rather suspicious. It was one of the largest seals I have ever seen. Its eyes followed my every movement as I approached it in the boat. Its white moustache, bristling, gave it the appearance of some fantastic monster. When it showed signs of taking to the water I risked a long shot. The bullet struck it full in the chest and sent it on to its back, but did not kill it. A moment later it turned over and commenced to make at its topmost speed for the sea. A second time I fired, and the bullet, entering the body just beneath the fin, penetrated the heart. It fell dead on the outer edge of the ice. We landed and skinned it. It was a magnificent specimen, and was the only seal I have ever killed on the run.

Swensen informed me that he had seen still another bear on the coast ice, and as soon as

we were aboard again we sailed towards it. There was, indeed, a bear, but it was too far in towards the interior to be approached. Further, the ice was rotten, so that even if I killed it, it would have been too dangerous to send men to bring its carcass to the ship. I therefore abandoned it.

While watching through the binoculars the movements of this bear as it ambled slowly away, I discovered four others. There were then five bears in sight at the same moment on the ice in Bruyn Straits! But there was also a fog, and large icebergs were rapidly accumulating between us and the open sea. I therefore thought it wiser to gain safety rather than wait the problematical approach of these animals.

At eleven o'clock Rachlew gave notice that he had seen a blue seal on a floe in the fog. As I was undressed, I told him to go and shoot it. He was away half an hour. On his return he told me that he had set out, accompanied by Mérite, in the canoe, and had made his way towards the supposed seal. It had dived before he got within range, to reappear alongside the canoe in the form of—a magnificent walrus! Rachlew had desired to harpoon it, but the men cried out to him to shoot, the canoe being too

fragile to withstand the attack of a walrus, as well as the blows from the ice. Rachlew, therefore, fired, and planted a bullet in its neck at a range of one yard only. The animal sank like a stone, to the lieutenant's great despair. Such was our last encounter with a walrus.

During the night we held a rather difficult course towards Cape Flora, but discovering in the morning that the ice-field would prevent us landing, I decided to bear south of the Cape and return to Norway. Thus our expedition to Franz Joseph Land ended. We sailed south without encountering those difficulties from the ice which had met us on the northward journey, and arrived safely at Hope Island and finally at Norway. Rapid as this return was, it was not without some interest from the standpoint of natural history.

We were at the end of August. The guillemots had commenced their migration, and during two days, the 26th and 27th, we were surrounded, as far as the eye could reach, with couples of these birds swimming towards the south. Each couple represented a mother and its young one, swimming apart from the others. There must have been thousands of them, and not one swam alone or flew; the sea was black with them. I have come to the conclusion

that the male guillemot returns to Norway in the autumn, either alone or in flocks, and probably on the wing, while each mother accompanies its young one, still too young to fly, and swims with it on that long journey from Franz Joseph Land to the shores of Finland.

SEALS

THE seas of Greenland and Barentz are inhabited by several species of seals, some of which are migratory, and are scattered everywhere over the ice-fields, while others congregate in, and rarely leave, particular localities.

Besides the vitulina seal, which is found on the northern coasts as far as Somme Bay, and in large numbers in the bays of western Spitzbergen, where it remains in the fjord before the glacier fronts, I have, in the course of my Arctic expeditions, hunted the phoca barbata, and its cousin the blue seal, the hooded seal or *Cystophora cristata*, the Greenland phoca, and finally the foetida seal.

All these seals, except the last one mentioned, sink instantly when shot while swimming. One therefore pays them little attention when they approach to examine the ship curiously, as they often do.

The best, and, in fact, the only way of

hunting seals is to stalk them when they are on the ice, and shoot them. The shooting is by no means easy, considering that more often than not the hunter must shoot from a whaling boat, balanced to a greater or lesser degree on a wave, the animal, too, being more often than not in motion.

I have never surprised a seal sleeping on the ice. Whether they be on their backs or their bellies, in the sun or in the fog, every half minute they raise their heads to look about them. They never relax their watchfulness as does the walrus, which sleeps soundly when alone. I do not know whether seals sleep in the water ; a Greenland phoca I kept alive for two months leads me to think that they do. Be this as it may, on the ice they never close their eyes for more than half a minute. They resemble greatly the over-weary traveller who lets his head fall on his chest, raises it again a second later, looks about him, then again falls asleep for an instant.

Further, these animals, to whatever species they may belong, rest always on the edge of an ice hole, their heads overhanging the water in such a fashion that they can dive at the first sign of danger. When occupying floating ice, they lie with their heads almost in the water,

so close to the edge that often, when the animal is shot and its head sinks abruptly, the ice gives way, permitting the body to slip into the sea, where it is lost for ever to the hunter.

To approach a seal resting in the middle of an extended ice-field is quite impossible. On several occasions I have attempted to do so by crawling on my hands and knees with the most extreme caution, yet, despite all my experience of stalking in this fashion, I have only on one occasion succeeded in bringing down my quarry, and then it was with a long shot. One can never get nearer than about one thousand feet, for the seal either scents the presence of an enemy or hears the creaking of the ice. The head of a seal at a thousand feet is a target of which not even the most skilled shot can be certain.

On the other hand, when a seal is lying on the edge of a floe, it is possible, in a well-handled boat, to approach to within about one hundred feet of it, a distance which renders it quite a simple matter to plant a bullet either in its neck or head. If the sun be warm, and the seal has been so long on the ice that its back is dry, it waits until the last second before diving. It is in such circumstances that one's chances of success are greatest. In the fog, the animals are even more suspicious than usual.

A wound, even though it be mortal, even though the bullet penetrates to the heart, does not prevent a dying seal from diving. The bullet must either enter the brain or sever the spinal column near the neck.

The impossibility of surprising a seal, combined with the difficulty in shooting it, lends all the charm to this sport which I have found so fascinating.

Although seals are nervous and very vigilant when on ice, in the sea they display, on the contrary, extraordinary confidence, and are remarkably imprudent. It is a common thing for them to come quite close to a ship to examine it. On one occasion in the Ice Fjord, an enormous sérac fell from the Nordenskjöld Glacier into the water with a report like that of an exploded gun. Even before the waters had resettled, numerous seals appeared on the surface, attracted rather than frightened by the noise, and immediately commenced to swim round the huge block of ice, inspecting it curiously. There are few sights more stirring than that fall into the sea of a mass of ice weighing perhaps several hundred tons !

In the year 1907, when we were suffering severely from ice pressure in the Kara Sea, huge bergs crushing against the ship and almost

tearing away our helm, I saw near us, between two bergs, a seal which came to the surface several times to breathe, at the imminent risk of being smashed to pieces.

The whole ice-field seemed to tremble. That which but an hour since had appeared an extensive white prairie covered with snow and starred with small lakes, had abruptly become a chaos of ice blocks, white, green, blue or yellow, which creaked and crashed and leapt one on to the other. The floes broke into large slabs which, forced by the great pressure, rose perpendicularly into the air and slid one over the other. All this mass was swept towards us at great speed; it was like the rush of a great river. Fortunately, the floe against which we lay protected us, and the swiftly moving bergs passed away astern as though carried onwards by some rapid torrent. The bergs, towering high into the sky and sliding along the ship's sides, threatened each moment to tear away our helm and screw. Thanks to Providence, however, we escaped damage, just as we had done in the Kara Sea, and the fate of those numberless vessels which have been crushed under similar circumstances.

The scene was truly terrible. The rapid movement of these gigantic ice blocks, smashing

and crushing each other, presented a spectacle magnificent and terrible, wild and savage. A mighty force, which no human power could resist, was moving the world about us.

Notwithstanding this, fifty yards away was a clear lake guarded by fallen hummocks. Even when the pressure was at its greatest, and we on the bridge were watching the moving bergs most anxiously, I saw a large seal appear several times on the surface of this lake, to breathe leisurely and inspect curiously the surrounding death-dealing chaos.

The incident reveals to what degree these animals are accustomed to deafening noises and the convulsions of the ice. But, regardless of danger as it is, the large seal generally prefers a more peaceful hunting-ground and rarely appears near the coast ice, where the large waves dashing in from the sea smash the ice to splinters and throw high into the air water-spouts and foam. They therefore seek the interior, where the ice floats in calm water beyond the power of the waves.

Certain species of seals live isolated. Among these is the barbata seal. Others, such as the Greenland seal, are gregarious.

The barbata seal, of which I saw a splendid specimen during my voyage north of Spitzbergen

in 1909, often grows to a length of from six to twelve feet, sometimes even more. When it is in fat, its body becomes cylindrical, giving it the appearance of an enormous leech. Its head then almost vanishes from sight. When it is thin, however, its hind fins are detached, enabling it to raise the anterior part of its body, and then it presents a truly imposing aspect.

Of my first meeting with the barbata seal to the north of Spitzbergen in 1909 I preserve a splendid trophy.

We had just escaped ice which had imprisoned us for eight days in Treuremberg Bay, and were navigating a channel through an ice-field towards Outer Norway Island, where the shipwrecked crew of the *Swanen* awaited us. The skipper, Jonas, signalled from the crow's-nest the appearance of a large seal on a floe away to the larboard; we lowered the Norwegian boat and pulled towards it.

A Norwegian hunting boat has neither helm nor tiller; the oarsman nearest the stern sits facing forward and steers the boat with his two oars.

When the boat comes within a certain distance of the seal, the men ship their oars and crouch at the bottom, while the steersman continues to row slowly, and the sportsman in the bows waits until he is within range.

We adopted this method in the present instance and approached almost noiselessly. Unfortunately, the seal was lying on its side, its belly and head being turned in our direction. When we were about forty yards from it, it raised its head and prepared to dive. Before it could do so, I fired and planted a bullet into its neck. It leaped high into the air, then fell back into the sea, dyeing the water with its blood as it sank slowly. We waited some time for it to reappear, but it did not come to the surface again, and we returned to the *Belgica*.

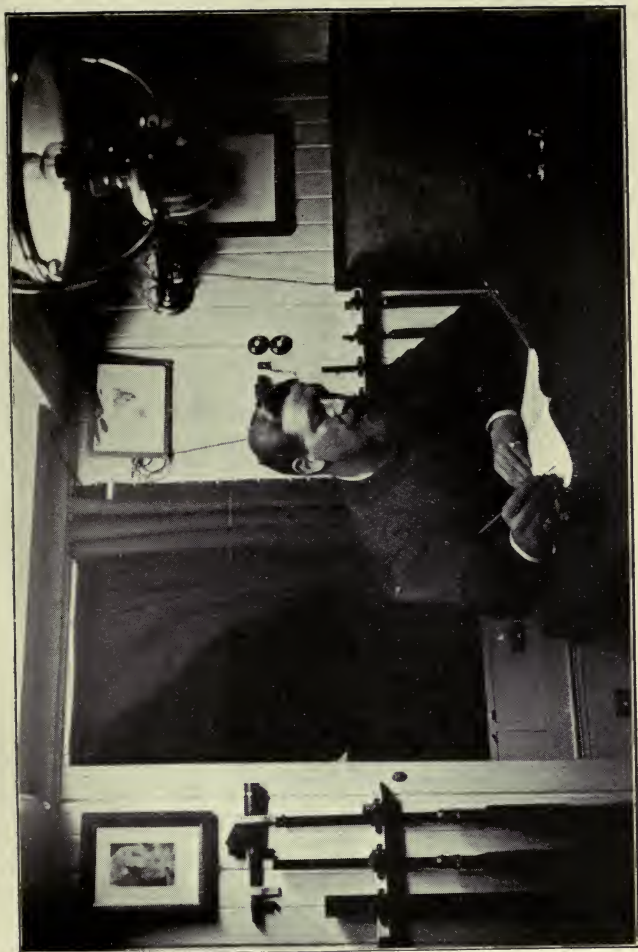
Farther on, a second seal was shortly sighted, and we adopted the same tactics. This one was very nervous, however, and dived before we could come within range. After a disappearance lasting several minutes, its head reappeared and I fired. Again it dived, to rise this time right against the side of the boat. A shot smashed its skull, and Jonas harpooned it instantly.

To get it into the boat was both a difficult and dangerous operation, so large was it. It was so heavy that we ran the risk of being completely capsized. To balance the boat, we were compelled to sit on the farther side whilst we got it aboard. Afterwards we pulled to the *Belgica*, where it was hoisted on deck and skinned.

The seal was a large female, almost six feet in length, its fat in places being four inches thick.

At ten o'clock at night I observed another seal on a floe a few hundred yards away. It appeared monstrous to me, who, flushed as I was with my recent success, promptly had the boat lowered, and we pulled silently towards it. Unluckily for me, it presented its back towards me. I had to wait patiently until it turned. This it did after some time, and, taking advantage of the movement, I planted in its neck a bullet, which made it spring high into the air. It fell backwards on to the floe, and again I fired. For a moment it remained stiff and motionless, then swiftly it dived into the sea, to reappear farther away. We could then see that the front of its head had been blown away, blinding it. Pulling hard we quickly came up to it. It dived, and reappeared a second time still farther away.

Jonas asked me to finish it, so yet once more I fired, and this time succeeded in killing it. It sank just at the moment the bow of our boat touched it, and from my place in the bows I saw the animal slowly descending to the sea bottom amid a flood of blood. Jonas, despite all his efforts, failed to harpoon it before it vanished into the depths.



A CORNER OF THE 'BELGICA'—MY CABIN.

I returned aboard in despair at having lost this magnificent specimen, fearing I might never meet with another so large. I vowed that never again would I fire at a seal unless I was certain of being able to plant a ball in its brain whilst it was still on the ice. It was better a thousand times to permit the animal to escape than to massacre it uselessly !

A good night's rest, however, consoled me for my loss ; I had passed several of the most interesting hours one can imagine in hunting these seals amid fantastic scenery and surrounded by a marvellous panorama.

Not a catpaw marked the surface of the sea, smooth and shining as some large, polished steel mirror. Immense icebergs, liberated by the thaw, raised their strange architecture high above the sea, their columns displaying every conceivable variation of blue against the golden light of the sun just ascending the horizon.

Between these floating islands of so many hues and colours we passed, lying at the bottom of the boat, while Jonas, silently steering, leant upon his oars astern. The surrounding scene called to mind a dream Venice of white and blue marble palaces arising from limpid canals !

Add to this the presence of a marine monster, seen from the distance stretched on the ice like

some Egyptian sphinx, its ears tensioned for the slightest noise, watching the horizon with its keen, intelligent eyes, ready to dive at the slightest sign of danger, and you have a picture of the most fascinating and absorbing of sports.

At half-past ten I had been told that another seal was in sight. Accompanied by the doctor, I entered the boat and set our course for it. The seal presented its back to us, and we approached quite close. As soon as I perceived that it was manifesting signs of inquietude, the oars were shipped and the boat permitted to drift onwards. At the moment it turned its head towards us, I fired. The shot smashed its skull and killed it instantly. Its head, which had been raised, sank down, blood streaming from its nostrils. This seal was also a female, measuring about six feet.

The night was so beautiful that I resolved not to retire. Had I done so I could not have slept, to such a degree had this sport bewitched me.

At midnight I was writing, when one of my men came to inform me that a barbata seal had been seen away to the larboard on an ice-field almost a mile long. Losing no time, we got into the boat and rowed for the animal. It dived, however, when we arrived in sight of the spot where it lay. Several small foetida

seals, impelled by curiosity, came to the surface around the boat, and I succeeded in killing one of them. We made a detour of the ice-field to get out of the wind, and soon saw a large black mass lying on the snow several hundred yards away. Having located its position, we lay down at the bottom of the boat.

I, dressed in white flannel, was in the bows, and served to mask Jonas, who, in the stern, pushed us noiselessly onwards, little by little, with long strokes of his well-greased oars. My white clothes, surmounting the little blue boat, gave us the appearance of being one of the many ice splinters amid which we moved. We now were able to clearly distinguish a seal. It was lying on its right side presenting its stomach towards us. Its head was to our larboard, in such a position as to render shooting easy as soon as it moved, but, until it moved, I could not hope to find a vulnerable spot. For the moment we could see only its rounded body, on which its hind fins lay like short, malformed arms. Its head, flung backwards, seemed like some grey ball hidden by the body. When we were within range, it grew restless, turned over on to its belly, and raised its head. I aimed and sighted for a vulnerable spot.

Seen as it was at that moment, the animal

was superb. It had raised itself on its fore fins and turned its nose to the wind. Its large, inflated neck resembled that of a bull. The head now became discernible. One could see the two long, bristly white moustaches forming a bar across its black face, in which sparkled large, rounded eyes surmounted by white brows. Altogether it was a very different animal from any I had encountered up to that time, and this face, to some degree almost fantastic, vividly impressed itself upon my memory. I perceived, however, that it was taking alarm, and, seizing an opportunity when its head was turned to me in profile, I aimed beneath the ear and fired. It relaxed like a spring, its head fell on to the ice; a shudder passed right through its body. Two vigorous strokes of the oars brought us to the ice. Two of the sailors, armed with boat-hooks, sprang on to it. The seal was not dead, but only paralysed beyond power of movement, yet it could still see. Its large eyes followed every movement of the men as they approached it; it seemed to wish to escape from them. Its gaze was so human in its intensity that it was impossible to endure it. A blow of the hook on the muzzle finished it, and we examined it. It rewarded us generously for our trouble. It was as long

as our boat and proportionately large. The skin was more like that of an otter than of a seal, so fine was it. There were marks of several old wounds on the neck, caused, Jonas told me, by the claws of the white bears which had attacked it and tried to kill it, in proof of which there were fresh bear tracks on the snow at our feet. Whilst we were examining the seal, I signalled the *Belgica* to approach, because it would have been madness to think of towing the monster or of taking it into our small boat. The *Belgica* drew alongside the ice as though it were a quay. A rope was made fast around the seal's body, passed through a foreyard block, and the crew hauled it aboard. Mérite watched the operation, and found that the animal made an admirable picture suspended as it was between the mast and the shrouds, the head hanging on one side. From the artistic point of view it was a 'discovery,' he affirmed. I did not share his admiration, however, and, fearing that the weight of the body might burst the skin, I had it swung on to the bridge, to our artist's great despair.

Between two and three o'clock I tried to stalk several large seals, but circumstances were not favourable. A swift current ran past the spot on the ice-field where the seals were

congregated, which, grinding the loose ice together, caused such a fracas that the seals were constantly on the *qui vive*. Perceiving us in the distance, they dived while we were still far out of range. I tried a very long shot at a large male just when it was entering the water. My shot caught it behind the shoulders; it sank instantly.

At half-past three, another large seal having been sighted, I asked Mélite to accompany me so that he might at once learn how fascinating was the sport and obtain a near study of the living animal.

In this instance, better conditions favoured us. We had passed beyond the current, and the ice was open, permitting us to move swiftly without touching the floating splinters. Consequently our progress was almost noiseless. The seal was lying on a small and quite smooth floe. It was not so large as the last I had shot, nor was its skin so fine. As soon as we were within range I aimed at the animal, whilst Jonas pushed the boat towards it. When it began to manifest alarm and prepare for a dive, I fired, aiming behind the ear. Its head fell on to the snow. Then it made spasmodic movements as though striving to reach the edge of the ice. To make certain, I planted two more shots in

its heart, and it moved no more. Mérite, who had been an interested spectator of the scene, had obtained photographs of this dénouement. He was sorry that the seal, when first wounded, had not leapt forward into the sea. The sight of the dead, still bleeding, animal nauseated him. For my part, I was only too happy at not having experienced those sensations which seize a sportsman when he loses a hard-won quarry ; in truth, one cannot be artist and sportsman at the same time !

Our prize caused us considerable satisfaction ; examination revealed it to be quite as beautiful a specimen as the female barbata I had shot. It measured over seven feet in length, while the male I had shot measured only something over six feet. There were marks of bears' claws on this one also.

Again I signalled the *Belgica* to approach. The Commander did so, taking every precaution, for the floe was so small that the slightest shock from the ship's bow would inevitably have smashed it to pieces. It was not merely the fact that we would have been thrown into the sea that concerned me ; the loss of my seal was a far greater consideration.

Mérite asserted that the loss of the seal would have been nothing beside the damage

which his photographic lenses would have suffered. As regards the doctor, neither the camera nor the seal preoccupied him; it was of us only he thought, fearing that an immersion in the icy water might probably place us in his hands. So infinite precautions were taken to range the *Belgica* alongside the floe, and to hoist the seal aboard.

We resumed our course. The landscape was magnificent, varying more and more as we neared the coast. Each bay was filled with the ice which locked the shore. We navigated large lakes like polished silver, whose shores were formed of ice—blue, white and green. The mountain peaks and the clouds were faultlessly reflected as in a mirror. Above us, flights of guillemots and mergules circled and wheeled, filling the still, pure air with their laughing cries.

About six o'clock in the morning I again attempted to approach several seals in Red Bay, near the Makaroff Glacier, without result; they dived too quickly.

In the course of my study of the habits of seals, I have observed that, during the months when the Arctic sun does not sink below the horizon, most northern animals, particularly seals, sleep during the night hours. I have also observed that seals almost invariably lie on

their right sides when on ice. I refer, of course, to large barbata seals, for the vitulina sleeps on either side or on its back.

Since that memorable night of 1905, I have shot barbata seals both in Greenland and Franz Joseph ice-fields, but nowhere have I ever encountered these animals congregated in great numbers.

In the neighbourhood of Greenland the hooded and blue seals take the place of the barbata. The blue seal, which to some degree resembles the barbata, differs only because of its bluish-grey hair, which becomes grey in older animals. The barbata is deep brown. Its moustache also is not so white. Its head appears darker and smaller, whilst its body appears like a pudding. Its anterior members are ridiculously small, seeming little more than appendices.

The fur of the blue seal is very beautiful and soft to the touch, but the animal is rather repugnant owing to its close resemblance to the leech.

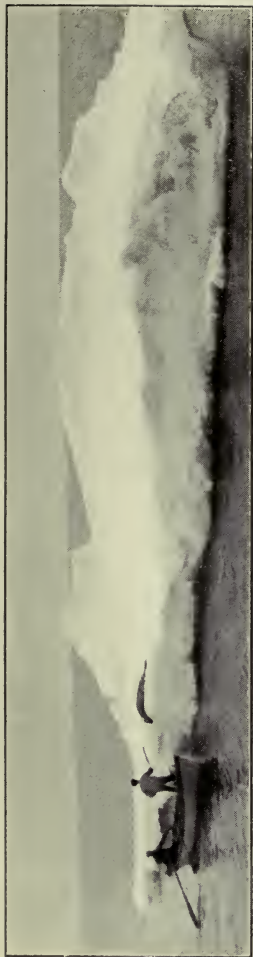
The first of this species I shot was on July 1, 1909.

We were sailing towards Wollaston Foreland, when two large seals were sighted on floating ice in the middle of a wide spread of free water.

We entered the boat and approached cautiously, because the seal for which we were making was upon moving ice, towards the centre of a floe, and near a hole. There was a swell running, which made rowing difficult. Nevertheless, we reached the edge of the floe before the seal moved. At that moment it raised its head and shoulders to observe us, showing us its small black face splashed with white bristling moustaches. Its head appeared very diminutive indeed compared with its big body, round as a pudding.

Waiting until it presented its chest to me, I shot it between the fins at the base of the neck. The shot paralysed it; its head fell on to the ice. As, however, it still moved a little, and it lay right at the edge of its hole, I fired a second time and killed it.

We stepped on to the ice, and for the first time I had the pleasure of being able to inspect one of those blue seals of which the Norwegians had often spoken to me. The animal's fine skin was blue, very different from that of the *barbata* seal which is found to the north of Spitzbergen. Its head appeared very small, and was quite out of proportion with its body; its moustache was whiter and more silky than that of the *barbata*, each hair curling towards



THE BOAT RECOVERING A DEAD SEAL.



APPROACHING SEALS.

the end. It measured almost seven feet from the nose to the tips of its hind fins. I had it skinned, and was surprised at the quantity of black blood which escaped from it; the cold air caused its stripped muscles to contract as though it were still alive.

The blue seal shares the ice-field with the hooded seal. The head of the adult male of the latter species is hideous, but altogether it is less repugnant than the blue seal, possessing at least the form of an animal. This species is widely scattered over the Greenland ice-fields, where one finds them singly or in couples, but never in groups.

Few old males are to be met with. Nevertheless, I have killed several, the largest of which measured almost ten feet, a quite remarkable length even for these animals. Its skin was very beautiful, being covered with black and white spots, but its head, with the glaucous, slit eyes, was horrible.

The hooded seal is so called because a small black bladder surmounts its head which, when the animal is angered, expands and assumes the shape of a mitre. It is for this reason called *Cystophora cristata*. In the male this bladder is used for defensive purposes, rendering it impossible for a man to kill the animal with a

club. Further, when wounded and incapable of flight, it sometimes becomes dangerous and inflicts serious bites. When the animal has been killed, its hood, no longer being inflated, sags downwards, becoming a limp mass of black and flaccid skin. In fine, it is a nightmare animal of the sea.

During my expedition of 1909 I did not kill a single adult hooded seal, but from the deck of the *Belgica*, and from the boat, I shot thirty young ones of this species.

When young, it is attractive rather than repulsive, its colour being uniformly iron grey, darkening slightly over the back. Its face is black, lit up by intelligent eyes, and as yet there is no sign of the malformation which in the future is to render it so repulsive. They are very agile, not at all timid, and when their skin is dry they wait until the very last moment before diving.

The ones I killed were about two years old, and measured from three to four feet in length, in one or two instances even more. Of all seals, this one undoubtedly is the most intelligent.

The Greenland seals are to be found in the Barentz, as well as in the Greenland seas. They are gregarious, and congregate in great numbers, sometimes swimming from one region to another,

sometimes resting on the ice. From the distance they appear like coffee beans dotted over the snow, extending away to the horizon. The females congregate towards the middle of April on the ice in the Gulf of St. Lawrence and at Jan Mayen. Their young, whose skin is at first quite white, cannot enter the water until they are fifteen days old. This is the period when the enemies of the species attack them.

A flotilla of Norwegian and English ships make for that part of the ice-field where the young are to be found; the sailors then land, and during several days kill the young seals with clubs.

Such a massacre is repugnant in the extreme, and, notwithstanding the restrictive laws the Powers have passed to limit such slaughter, from three to five hundred thousand seals are destroyed in this way every spring. As the female bears only one, or at the best two, young ones, it is surprising, considering all the circumstances, that the species has not yet disappeared from the Arctic regions. As a matter of fact, however, they are still so numerous that, notwithstanding these periodical hecatombs, the Norwegians contrive to shoot even a still greater number of adult seals during the summer.

I need hardly say that young seal-hunting with clubs did not attract me. On one occasion, however, I encountered a considerable group of Greenland seals, and I permitted my Norwegians to kill several of them in order to study their methods. There were young seals with grey and black spotted skins, and several groups of old males, the marks on whose backs resembled either a saddle or a harp. The English call these the saddle-back or harp seal.

We were coasting the eastern side of Jan Mayen Island on June 22, 1909, when the Captain, from the crow's-nest, sighted ahead an ice-floe. About midday we encountered the first ice drifts, and saw several seals in the water. The ice rapidly thickened, and from aloft the Captain announced the presence of a large group of seals amid the floes. I entered a boat and prepared for sport. We quickly arrived at the spot where the seals were assembled; there were thousands of them scattered everywhere over the ice in groups more or less numerous. Two or three young ones were to be seen on each of the smaller floes, while on the larger ones were hundreds of old Greenland seals, easily recognised because of their black heads, their white bodies, marked on the back with a 'V,' the point of which divided the head.

The young ones were not at all timid, and permitted themselves to be slaughtered without seeking to escape. The old ones, on the other hand, were not to be approached, and dived into the sea as soon as they saw our boat in the distance.

We commenced with the young. I installed myself in the bows of the boat, sitting at the bottom between my two rifles, my head just above the gunwale. Joe hid himself in the stern with his camera; Swensen and two men were at the oars.

On the first floe we found three young seals, who stared at us with their round eyes, but made no attempt to move. Nevertheless, as a precaution, everyone hid at the bottom of the boat, except a man noiselessly rowing and steering. When we came within range I fired, killing one of them instantly. The others raised their heads at the noise and looked from one side to the other without making any attempt to save themselves by diving.

I shot them one after the other.

If the hunter is a good marksman, and succeeds in killing the first animal with his first shot, the other seals on the same ice do not take alarm, and, seeing their companion motionless, do not take to flight. But if the

wounded seal becomes convulsed, or falls into the sea, they all dive in a second.

My third seal shot, the Captain and old Hermann stepped on to the ice, dealt each seal a blow on the head with the boat-hook to make death certain, skinned them, and removed the grease, leaving only the carcasses, together with the heads and fins.

The skins we soaked in the sea to wash away as much blood as possible, and afterwards flung them into the boat. The men re-embarked, and we made for another floe where the same thing occurred.

It takes from one to two minutes, according to the skill of the man and the size of the animal, to skin a seal.

We continued going from floe to floe whilst seals remained. It was massacre rather than sport. At the same time, shooting was difficult because a fresh breeze was blowing. We were amid loose ice; the boat bumped and rolled constantly, while the surface swell caused the floes the seals occupied to rise and fall constantly. As a result, it befell more than once that I only wounded a seal, which dived, dyeing the water with its blood. Whenever this occurred, flocks of petrels settled instantly to drink the blood. These birds followed us

like vultures after a time. As soon as a seal was killed, they clustered on the body, and it was necessary to drive them away before we could skin the animal. As soon as that operation was ended, the birds commenced to fight over the remains.

The petrels still escorted us when we returned aboard, and Rachlew captured several of them with a hand net. We placed them on the bridge, from which they could not escape, there being insufficient space for them to spring. Not that they desired to escape! For as soon as they saw the skins they flung themselves upon them and commenced feeding.

From this little expedition I brought back thirty-five skins.

Unfortunately, I had lost several animals, old males for the most part, which I had been compelled to fire at from a great distance. It is extremely difficult to kill an old male with a single shot, even when within quite easy range.

We took some tea, and then set out again, to the delight of the sailors, whose wages would be augmented by the price obtained for the seal grease. Even before leaving the deck, I shot five more seals that came to inspect the ship.

This second expedition also proved very successful.

The sun, bursting through the clouds, shone obliquely on the ice blocks, which, worn by the sea, were both curiously and picturesquely shaped. Some were flat, others rose in columns reminding one of some temple of the Egyptians or the Dolmans, forming indigo blue caverns where the sea was open.

Little by little the Beerenberg cleared, and for several minutes we were able to admire that snow-capped giant towering high above us, seeming to rise from the sea like an enormous ice sugar-loaf.

At eight o'clock I returned aboard with forty-six skins, among which were several very fine specimens of old males. The following morning at nine o'clock more seals were sighted, and I embarked, accompanied by Rachlew, determined on the present occasion strictly to limit the slaughter. The sea being very rough and the wind very penetrating, shooting was difficult, but, from a sportsman's point of view, interesting.

I commenced by killing several young ones, then we came to the larger floes on which were hundreds of old males, stretching and scratching themselves, rolling and roaring, twisting about in every possible way.

Through the binoculars I studied them at

play and watched them diving into the water, then remounting the ice by gripping it with their fore fins, which are veritable fur-gloved hands, having very sharp nails, however.

As soon as we approached, they dived. They swam in a line, all diving and reappearing at the same moment, elevating half their bodies above the water.

On one floe, from which we drove a numerous band of these old males, we beheld a dark, motionless mass.

The men said it was a dead seal, but having just seen it surrounded by others, and well knowing how rarely seals will remain near a corpse, I disagreed with them and determined to examine it closely.

Passing near the animal, which was lying on its side as though asleep, I observed that one of its fins moved. I decided, as it manifestly was not dead, to capture it alive.

The men persisted in saying, however, that that would be impossible. Rachlew proved them wrong by stepping on to the ice and running right up to the seal.

The animal awoke, and attempted to escape, but Rachlew barred the way with his ice-pick, and the seal remained quiet, drawing its head between its shoulders, crouching as if awaiting a blow.

Two of the men seized its hind fins and flung it into the bottom of the boat, where it remained motionless.

Whether it was asleep, or too old or too fat, I do not know, but it is the one and only occasion I saw a seal wait for a man to approach it. It was a living lesson for those that had escaped, showing how idleness and obesity render self-defence impossible.

Having killed six large males, I returned aboard, and we resumed our north-westerly course.

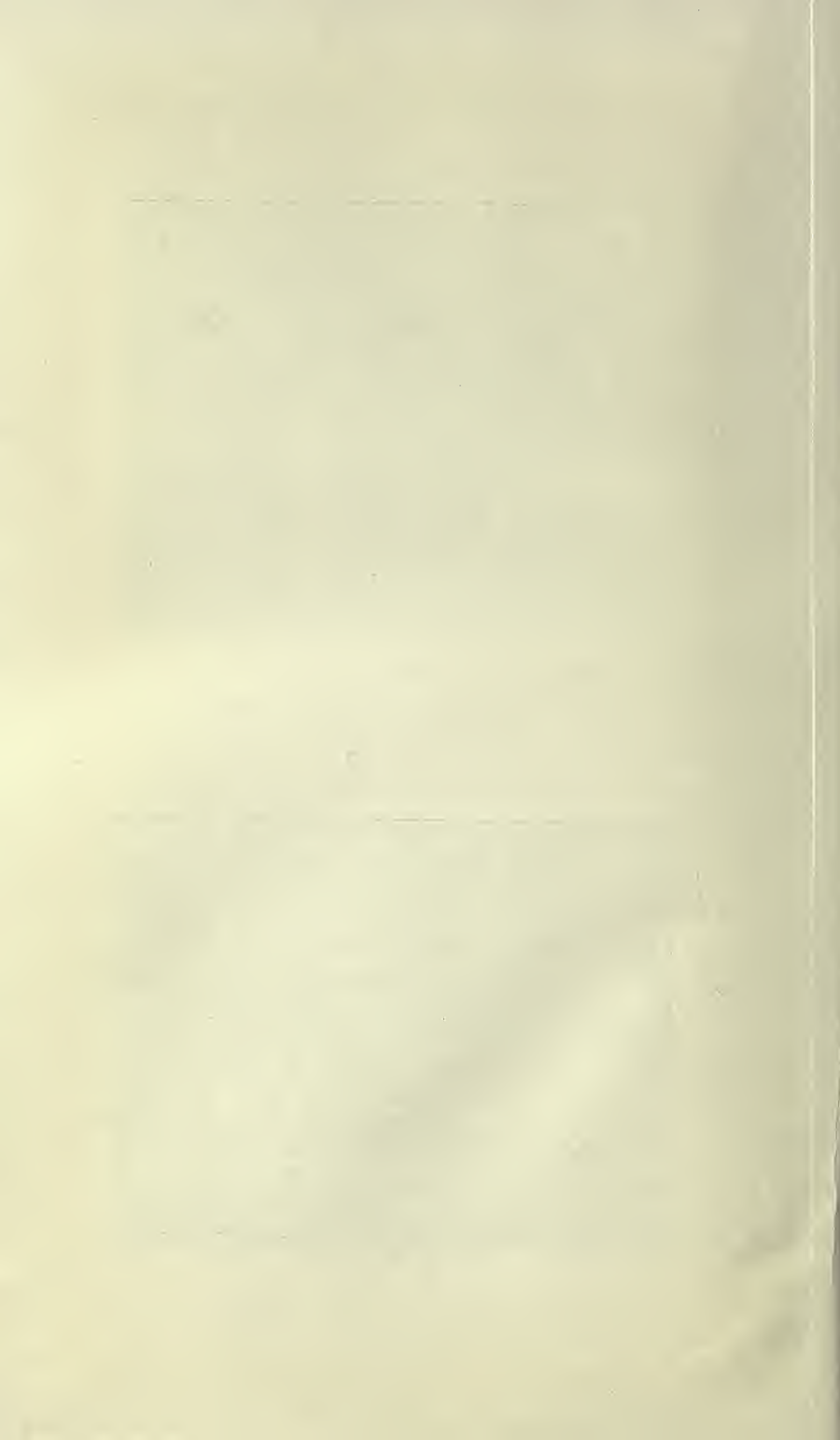
The ice was rather fast, and threatened to become still more so, so we steamed through the open canals at full speed. From time to time snow fell and the cold was intense.

The seal which I had just captured, and which had been flung aboard without ceremony, suddenly became animated and began to assert itself in a manner not at all pleasant. It successively charged every man aboard, snapping at our calves and boots. A general *sauve qui peut* ensued. Nevertheless, we were rather pleased at being able to study intimately the supple and powerful motions of this animal, which a few minutes before had seemed like nothing so much as a large pudding.

Mérite was jubilant, and photographed it from all points. As regards Récamier, who had



OUR PRISONER



intended to examine the intestinal parasites of the seal, he was so overcome and sickened by the vile-smelling excrement of our new pensioner that he abandoned the idea. In the name of hygiene, he commanded that the deck should be instantly soured with water.

So ended my day's sport.

We preserved the captured seal aboard for two months. It was confined, in the first place, in one of the iron-plated casks destined for pickling skins. Then, when it became more used to us, we let it roam the deck. It became quite familiar, following the cook or my valet, Louis, who fed it like a dog.

Being unable to supply it with fresh fish, we gave it seal and bear fat, salt cod, and later, at Spitzbergen, the bodies of young guillemots, which it gulped down whole. This food could not have agreed with it, although it took it readily enough, for, despite all our care, it grew thinner and thinner. As its fat decreased it took a chill, and finally died before our return to Europe.

If our return had occupied no more than a month or six weeks, we could have brought it back alive and in good health, because it only began to grow thin and display signs of suffering during the last week.

Each morning the men turned the hoses upon it when washing the deck. Curiously enough this sousing, instead of pleasing it as I had thought it would, made it absolutely furious.

During our imprisonment amid the ice in the Kara Sea we had another seal as pet, but this one was never brought aboard.

When the thaw opened a hole in the ice for the ship, a small vetulina seal appeared regularly to inspect us. It remained for long intervals with its head above the water not ten yards from us, curiously inspecting the *Belgica*, and manifesting no fear of us when, leaning over the taffrail, we welcomed it. Because it displayed no fear we did it no harm.

Let us hope that the confidence in mankind it probably acquired from the experience of those few weeks' familiarity with us, never led it to approach the neighbourhood of a seal fisher !

THE END

PRINTED BY
SPOTTISWOODE AND CO. LTD., COLCHESTER
LONDON AND ETON



Gen.Lib.

Ag.R.S.

7 DAY USE

Gen.Lib.

Ag.R.S.

RETURN TO DESK FROM WHICH BORROWED

Agric. Reference Service

**This publication is due on the LAST DATE
stamped below.**

JUL 17 1967	

RB 17-60m-8,'60
(B3395s10)4188

**General Library
University of California
Berkeley**

M314111

